

APRIL 1960

# BUTANE-PROPANE *News*

LPG sales rocket at  
Cape Canaveral...23-26

A CHILTON PUBLICATION

HEADQUARTERS FOR L.P. GAS INFORMATION SINCE 1931

**HOT**  
**SUMMER DAYS ARE COMING**

*... for a profitable summer business*

**PLAN NOW**  
**TO BUILD THAT SUMMER LOAD**

- TRACTORS
- STATIONARY ENGINES
- CROP DRYING
- TOBACCO CURING



*Contact our nearest Sales Office*

Avail yourself of WARREN'S many facilities designed to help you obtain and hold more summer business.



**WARRENGAS**  
*the Concentrated fuel*



**WARREN PETROLEUM CORPORATION**

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NASHVILLE, TENN. • SPOKE, WASH. • GARDEN CITY, KANS.

# When you up-end your cylinders, what do you see?

**Rust and corrosion?** Not if your cylinders are Hackney double-bottom head cylinders! The smooth, rounded contour of the *second full bottom head* leaves no place for rust and corrosion to form.

**Crushed foot rings?** Not if your cylinders are Hackney double-bottom head cylinders! The integral, fluted foot ring and double-bottom head construction, welded all around, adds the strength needed to withstand rough handling and accidental dropping.

**Worn-out bottoms?** Not if your cylinders are Hackney double-bottom head cylinders! These strong cylinders can end bottom failure for many years beyond the lifetime of conventional cylinders! Fewer cylinder replacements and more money for profits.

**A deep, rusted crevice?** Not if your cylinders are Hackney double-bottom head cylinders! There is no sharp angle where foot ring and bottom are joined. Cleaning and painting are easy to do. Rust can't get a foothold.

**Mud, snow and ice?** Not if your cylinders are Hackney double-bottom head cylinders! The broad, shallow, fully rounded bottom offers virtually no chance for accumulations of compacted materials.

**Check your cylinder bottoms now.** Consider what Hackney *double-bottom* cylinders can save you in maintenance time, repainting dollars and rebuilding costs. Write for quantity prices and delivery dates.



**Hackney LP-Gas cylinder—Model RC-100A-DB**  
Cross section shows how Hackney patented double-bottom head construction is stronger, doubles life of cylinder, makes cleaning and painting easier, and reduces replacement and maintenance costs.



## Pressed Steel Tank Company

Manufacturer of Hackney Products

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LP-GAS CONTAINERS FROM ONE POUND TO 30,000 GALLONS



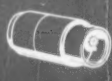
cylinders



systems



fuel tanks for  
trucks and tractors



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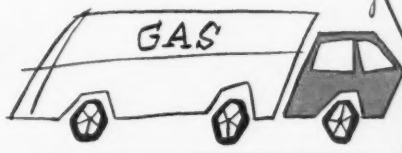


transports



bulk storage tanks

# *Is your capital tied up in account receivables*



If slow pay is your headache, vapor metering is a sure cure. With meters you'll make it easy for your customers to pay. Meter readings will replace those large "as delivered" fuel bills with small "pay as you use" statements. These are charges that customers will learn to anticipate and budget for—charges that they can and will honor promptly.

Lowered account receivables is only one of many good reasons why you should look into the money saving, money earning advantages of metering.

Write for our "tells all" bulletin ADV. 41. Rockwell Manufacturing Company, Pittsburgh 8, Pennsylvania. In Canada: Rockwell Manufacturing Company of Canada, Ltd., Guelph, Ontario.

## **VAPOR METERING**

*will improve your profit picture*

### **THE METER THAT STAYS NEW, SAVES MONEY IN SERVICE**

The clean cut lines of Rockwell meters assure your customers that the accuracy of your measurement matches the quality of your service. They are strong and safe, easy to handle and install, weatherproof and durable. The capacity rating of 240,000 Btu's per hour is ample for most any service.





## CHARLIE OWEN STAKES HIS WHOLE OPERATION ON CHEVY'S STAMINA AND TORSION-SPRING RIDE

C. L. Owen, vice-president of GO Oil Well Service, Fort Worth, puts his faith and \$15,000 worth of electronic equipment in his Chevy panel and sends it out on rugged oil field duty every day of the week. They used to have to pad the sensitive electronic recording panel to cushion out road shock and vibration. But not any more. Not with torsion springs soaking up bumps and jolts. Chevy's new ride is "made to order," according to Charlie Owen. "In our oil well locating operation we stay on the go anywhere, any time . . . and count on less breakage along with lower maintenance costs." The GO company goes for Chevy 100%.

■ They're speaking right up, these owners of '60 Chevrolets, talking about a new truck-and-tire-saving ride that leads to shorter trip times, too. Chevy's independently suspended front wheels step right over bumps, virtually eliminate most of the severe impacts that can wear out trucks and tires before their time. You profit by a big savings on maintenance; get a bigger daily work output because these trucks float you over rough roads with fewer slow-downs. New Chevy cabs are built to last longer, boost driver efficiency. There's more leg room, head room and hip room than ever before, new visibility

that's greater by more than 26%, new foam-padded seat, new tougher construction features—double-panel roof, box-section door pillars and many more. Tough truck power that knows the most about saving money. Efficient short-stroke Chevy V8's with up to 230 h.p., 335-ft.-lbs. of torque. Or trucking's most widely used 6's, engines that do more work per dollar with time-proved, truck-built components. Look into it for yourself; Chevy's totally new working ability is at your dealer's right now. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

## 1960 CHEVROLET STURDI-BILT TRUCKS •



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## The mail got through??

When magazine publishing is your business, everything hinges on getting the written word from one place to another. Your lifeline is a long, tenuous thread, held together by an assortment of people who make it their business to see that the mail goes through.

It's a situation calculated to speed the onset of grey hairs, which certainly don't need any outside help to make them grow.

Thanks to Uncle Sam's dedicated crews, we've precious little to complain about. Over the years, our mail, both incoming and outgoing, has been getting through. That is, until a few months ago.

Our luck took a change for the worse last November, when a mail plane crashed at Midway airport in

velopes. More charred scraps.

More moments of wondering, too, whether letters people wrote us never got answered, because they never arrived.

The worst, however, is yet to come. All BPN's writing, editing, and editorial preparation is done in our Los Angeles office, while the typesetting, printing, and mailing are done in our Philadelphia plant. So far, all the mail that has been lost or damaged was traveling from east to west.

Someday, a small voice keeps saying, it's going to be a plane traveling from west to east, and aboard it will be weeks and weeks of editorial work. Gone up in smoke.

Shut up, small voice.

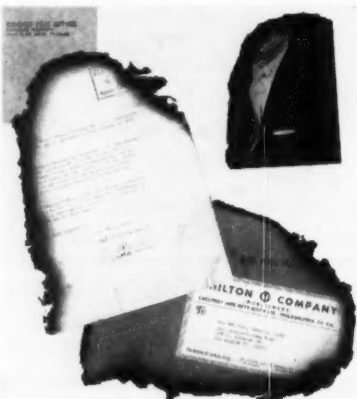
## Gas lights to the rescue!

Speaking of air crashes and other unhappy things, here's a case of one that never happened, thanks to gas lights.

Rockwell Manufacturing Co. tells the story. It was nearing midnight and two army helicopters, battling a blinding snowstorm over Russellville, Ky., were hopelessly lost. Finally, they spotted two patches of light. One was a large red neon sign on a restaurant. The other appeared to be a landing strip. So down they came.

At the last moment, they realized it wasn't a strip after all. It was the parking lot at Rockwell's Russellville plant, all lit up with gas lights. They eased over into a vacant lot adjacent to it, to avoid landing on a parked car. But they made it down safely, thanks to gas lights.

Wouldn't electric lights have done as well? Probably so, but now that gas lights are back in style again, Rockwell (a good gas equipment manufacturer) probably wouldn't be caught dead with ornamental electric lighting. We hope.



Chicago. We were well represented, mail-wise, on that flight. For weeks afterward, franked envelopes from the Chicago post office dribbled in, each containing charred scraps of letters, news releases, pictures, and other grist for the editorial mill (see photo).

The rash of air crashes shortly after Christmas left us untouched and by late January we were beginning to think Lady Luck was back on our side again. But not for long. This time it was a railway car fire. More franked en-

NOW YOU CAN HAUL

11,800  
WATER  
GALLONS



## WITH LUBBOCK MACHINE ENGINEERED T-1 TANKS

The new ASME Code and Lubbock Machine "higher payload" engineering means you can now haul 10,600 net gallons of propane in some areas with the Bodyload-and-Pup unit shown above.

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Through experience Lubbock Machine has found there are many ways that T-1 steel can be used to increase your payload. Let us show you how Lubbock Machine experience in engineered transport tanks can solve your payload problem . . . write, wire or phone today.



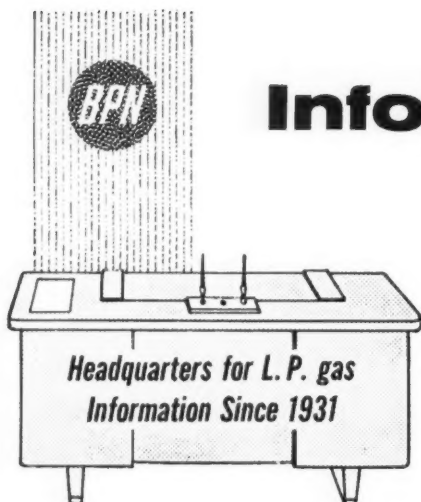
11,000 WATER GALLON PROPANE SEMI-TRAILER

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# Information Desk

*Propane can be used satisfactorily as an explosion bomb . . . A number of LPG dealers are in agreement that 10 year write-offs are generally accepted.*

## Use of propane for explosion bomb

*California*

In the past, in research work, we have used dynamite to take samples of fish in the ocean. However, this has been discontinued because of serious accidents caused by persons' lack of knowledge and experience in the handling of explosives.

I have experimented with a mixture of acetylene and oxygen in the correct proportions put into metal containers under pressure and exploded by a suitable spark. This has worked satisfactorily except for the fact that acetylene is regarded as a very unstable gas and there is danger of an explosion occurring even in the process of transferring or mixing with air or oxygen.

Can either propane or butane be introduced into suitable metal containers and the correct amount of air or oxygen added with reasonable safety? By that I mean is there any possibility of an explosion occurring simply in the transferring or the adding of air to get proper combustion? What amount of gas and under what pressure and what size container would be necessary to get the equivalent explosive force of one stick of 40 percent dynamite? What percentages of either propane or butane and oxygen or air are required for good combustion? And what would be the most practical way to mix them so these correct proportions could be easily measured?

In practical use these bombs would be lowered to considerable depth under water and then deto-

nated by electrical means. This part of the setup has been used and is entirely safe. Of course all reasonable precautions would be taken, having the proper containers for storage, and containers of suitable strength for the bomb itself.

A. L. R.

We believe that propane can be used satisfactorily for the purpose you describe since acetylene has shown results. It is true that acetylene is unstable, especially at pressures over 15 psig. Acetylene can disassociate at these higher pressures without oxygen or ignition and with considerable force.

Propane and air can be compressed into the container at much higher pressures than acetylene, thereby packing much more energy into the container. The maximum pressure to which the propane and air can be compressed is controlled more by temperature than any other factor. The mixture temperature must be kept well below the ignition temperature which is between 900- and 1000 deg. F.

The flammable limits for propane in air are much closer (2.2 per cent for the lower and 9.5 per cent for the upper) than for acetylene (2.5 per cent and 8.1 per cent).

Although the correct gas to air ratio for theoretically perfect combustion is 23.8 cu ft of air for 1 cu ft of propane, the maximum rate of flame propagation occurs at a weight ratio of 4.7 to 5.0 per cent gas in air or 20 to 21 cu ft of air per cu ft of gas. Since it is the rate of reaction that provides the greatest shock we believe the gas-rich mixture is best for your purpose.

The problem of accurately mixing the gas and air to correct proportions is simple. A small Selas or Eclipse mixing valve may be used on the suction side of a compressor. These valves accurately proportion air and fuel to predetermined ratios. There are, however, two hazards which must be considered. Compressing the gas mixture to high pressures raises the temperature. Compressing the gas to 100 psig can raise its temperature to as much as 475 deg. F. However, this is a theoretical temperature and is probably not reached due to heat loss factors. It could, however, ignite some low-ignition temperature impurities (dust, oil mist) which in turn would ignite the mixture. Second, placing the mixture in the tight container makes a "bomb" to be transported and handled.

We suggest the following. A measured amount of propane can be placed in the bomb and transported and handled safely because the mixture will be outside the inflammable range. The air can be added from a tank or compressor just before the bomb is put into the water, or even after it is submerged for the ultimate in safety.

You did not give any indication of the size of container or pressures you used with acetylene or consider with propane. We have had no experience in trying to stun or kill fish with L. P. gas bombs and so can't offer much help on that portion of the project.

However, to fill the containers with the proper proportions of gas and air we have worked out a ratio of pressures. By filling according to the pressure ratio, volume need not be known. Careful attention to the



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21 WAYS BETTER THAN THE AUTOMATIC REGULATOR YOU ARE NOW USING

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ADDRESS

CITY  STATE

MY NAME  TITLE

## Information Desk • Continued

pressures listed will provide the proper mixture in the tank for the most rapid rate of flame propagation. A little experimentation with the pressure ratio may prove there is a better ratio at high pressures in your case.

The table works as follows. Assume the container is full of air at atmospheric pressure. Connect a supply of propane to a connection on the "bomb" and allow propane to enter until the pressure reaches that indicated for propane pressure. Shut

the valves and disconnect the propane supply. The mixture in the tank is not within the flammable limits and can be transported and handled safely. When ready to use the "bomb" or to fill it with the proper amount of air, connect a source of compressed air to the "bomb" and introduce air until the pressure reaches that listed in the second column. The "bomb" is charged with the proper mixture and ready to be ignited. The last column of figures indicates the number of cubic feet of gas per cu ft of "bomb" space.

Propane pressure psig	Final pressure psig	Cu ft gas per cu ft "bomb" space
1.15	10	.084
1.61	20	.111
2.12	30	.143
2.60	40	.175
3.00	50	.207
3.50	60	.239
4.00	70	.270
4.45	80	.302
4.90	90	.334
5.35	100	.336

As an example, assume the final pressure will be 50 psig. Then the pressure will be built up from 0 to 3 psig with propane before air is connected and the pressure is increased to 50 psig.

Increased pressure of the mixture raises the upper limit of inflammability. It also increases the rate of flame propagation. Combustion at constant volume can increase flame propagation to the point where detonation may occur. This would seem desirable for your purpose.—Ed.

## Ten-year write-offs generally acceptable

Vermont

Do you have any handbooks, other literature or information giving estimated useful lives for federal income tax purposes on the following:

1. Propane storage tank, 30,000 gal. capacity.
2. 100 lb bottled gas cylinders, hoods, regulators, indicators, etc.

H. G.

I regret we don't have any handbooks, literature, or any information which would give estimated useful lives for federal income tax purposes of the items you listed. We have had similar requests for information in the past, and have never been able to find an authoritative source.

The government, generally, has not set any write-off periods for such things, but leaves it to the individual to establish his own schedules. This, of course, is very disconcerting, because (as may have happened to you) the schedule you have set up for yourself might be disallowed by an arbitrary ruling of the Internal Revenue's field man.

However, I have talked with a number of L. P. gas dealers about this, and they are in agreement that a ten-year write-off is acceptable. Some feel rather strongly that a five or seven-year write-off should be in order, but I don't know of any cases where such a term was audited and accepted.—Ed.

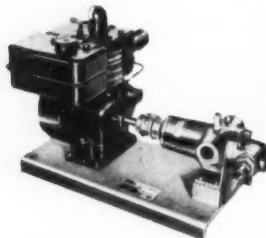
# CUT FUELING AND BOTTLE-FILLING TIME!

with Viking's 5-10-20  
30 G.P.M. LP-Gas Pumps

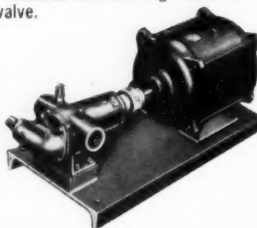


**MODEL FH-696** — 5 G.P.M. — This is the most compact, light weight Viking LP-Gas fueling pump. Has same sturdy Viking "gear-within-a-gear" construction as larger models. Mounted directly to flanged 1/2 HP, single phase, 3450 RPM motor. Pump includes ball bearing construction and safety by-pass valve.

**MODELS GG, H and HL-196** — 10 G.P.M., 20 G.P.M. and 30 G.P.M. — For fastest fueling and bottle filling of LP-Gas, use one of our three motor driven units. All equipped with mechanical seal, ball bearing and O-ring construction with safety relief valve on suction port and safety by-pass valve on pump head. 1/2, 3/4, 1 and 1 1/2 HP, 1750 RPM motors.



**MODELS GG, H and HL-198** — 12 G.P.M., 20 G.P.M. and 30 G.P.M. — The same Viking LP-Gas pumps as on motor driven units shown above, except direct connected to 4 stroke cycle gasoline or LP-Gas powered engines. Equipped with rewind starter, shielded ignition system, flame arresting muffler, flame arresting air cleaner and ground connection. 1.3 HP, 2200 RPM and 3.7 HP, 1800 RPM sizes used.



For complete information, send for catalog HB today.

# VIKING PUMP COMPANY

Cedar Falls, Iowa, U.S.A. • In Canada, it's "ROTO-KING" Pumps  
SEE OUR FILE IN BUTANE-PROPANE CATALOG

# EAST, WEST, NORTH OR SOUTH— THE STORY'S ALWAYS THE SAME

## Oklahoma Distributor has 250 Tractors on Cities Service LP-Gas

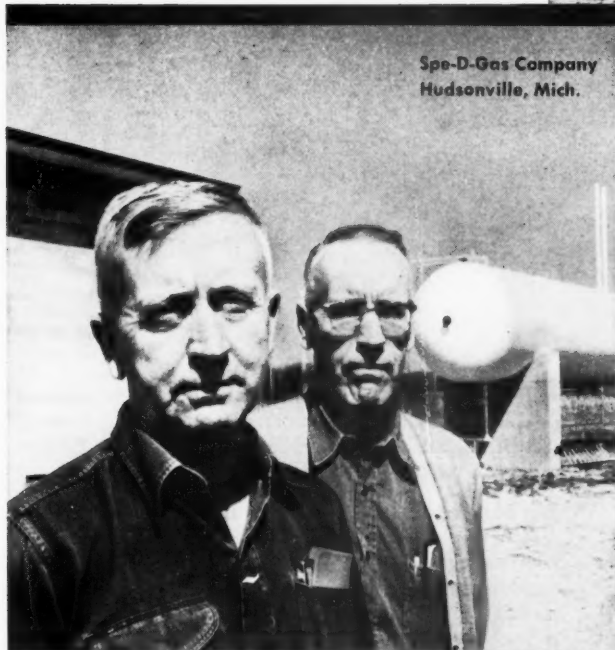
Farms run big in Oklahoma . . . some being described in miles instead of acres. Kelle Oil Company sells 90% of its Cities Service LP-Gas for farm use.

Aubrey Kelle, partner in Kelle Oil states, "Farms are good year-round customers . . . and they're permanent. Oklahoma farmers use LP-Gas for everything from heating to air conditioning. Cities Service was a great help to us when we were first getting started in 1951. Technical help has continued to be excellent and service couldn't be better."

Kelle Oil Company  
Braman, Okla.



Spe-D-Gas Company  
Hudsonville, Mich.



## Michigan Distributor Celebrates 20 years with Cities Service

The Hubbard brothers, partners in Spe-D-Gas, have been selling Cities Service LP-Gas since 1939. Now, as it was two decades ago, Spe-D-Gas sells most of its Cities Service LP-Gas in cylinders.

Serving the Hudsonville area out of their plant, Spe-D-Gas has hundreds of customers for bottled gas. W. G. and L. C. Hubbard have conveniently located their plant near the Cities Service two-way pipeline from East Chicago. "Our main storage is over there," says W. G. Hubbard, indicating the Cities Service storage terminal. Cities Service has several such terminals strategically located throughout the Midwest to serve distributors of LP-Gas.



3435 Broadway  
Kansas City 11, Missouri

20 N. Wacker Drive  
Chicago 6, Illinois

701 Sherland Building  
South Bend 1, Indiana

500 Robert Street  
St. Paul 1, Minnesota

3101 Euclid Ave.  
Cleveland 15, Ohio

7730 Carondelet Ave.  
Clayton 5, Missouri

170 University Ave.  
Toronto 1, Canada

1658 East Euclid  
Des Moines 13, Iowa

626 E. Wisconsin Ave.  
Milwaukee 2, Wisconsin





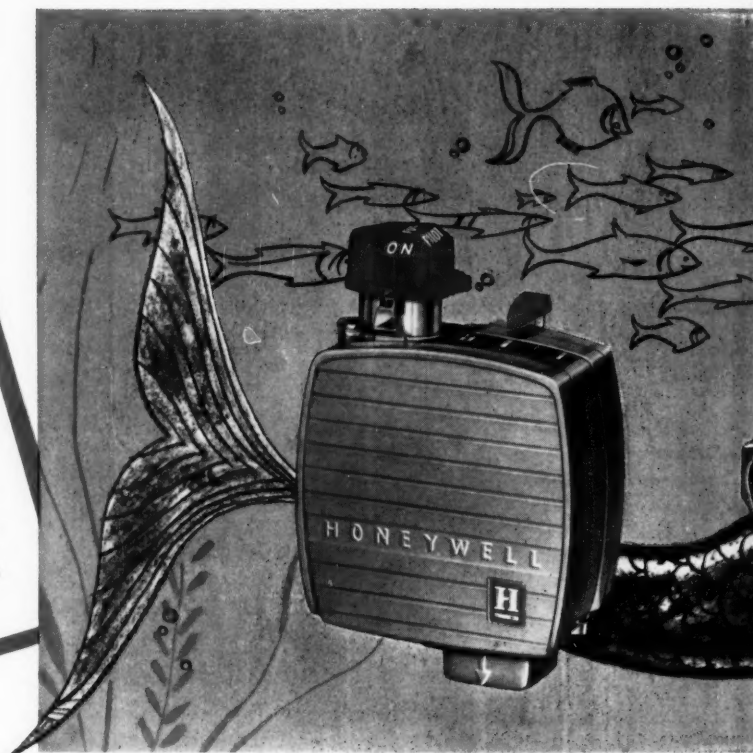
ANOTHER DIAMOND JUBILEE EVENT FROM HONEYWELL

# WIN A FABULOUS 7 - HONEYWELL'S BIG "NAME"

Your entry automatically  
makes you a member of  
Honeywell's big  
"PUT-YOURSELF-IN-  
HOT-WATER" CLUB!

*Visit Beautiful  
Vacation Spots!*

Imagine basking in beautiful, sunny Acapulco  
... exciting and mysterious Jamaica ... or  
visiting the fascinating Banff National Park  
in Alberta ... with all expenses paid!



Here's your chance to win a fabulous dream-vacation for two ... a chance to see romantic, far-off places ... to enjoy one of the finest, fun-packed vacations of your life!

**Here's how it works:** Honeywell will award three separate seven-day trips to three different winners during the next nine months. The winner of the first contest will visit Banff National Park in July; the second winner will visit Jamaica in October; the winner of the third contest will visit Acapulco in January of 1961—all winners may elect to take an alternate prize of \$1,000.

**How to enter:** Simply fill out the coupon suggesting a name for the Honeywell Mermaid and indicating that you agree to the rules therein. Enter any *one* or *all* three of the contests if you like! Entries for the first contest must be postmarked no later than May 15th; second contest: August 15th; third contest: November 15th. Duplicate trips will be awarded in case of a tie.

Contest is open to contractors, dealers, plumbers, merchandising utilities and other water heater retailers. Entries

will be judged by the staff of R. L. Polk & Co. on the basis of aptness, originality and uniqueness, and their decisions will be final. All winners will be notified by mail. Contest is void in Wisconsin and wherever else prohibited.

**Big Bonus prize!** If you are a winner—and have displayed a Honeywell-controlled water heater in your place of business during the entire last two months of that contest period—you will receive a \$500 savings bond! You can also qualify for a \$500 savings bond, assuming you're a winner, if you've installed a Honeywell-controlled water heater at any time during the contest period.

**A contest for wholesaler salesmen, too!** If you're a wholesaler salesman, you can win a valuable deluxe calendar watch for signing up and helping any one of the three retail winners with his entry. What's more, you'll be helping each and every one of your dealers sell more water heaters! So, talk to your customers today, get them to take part in this exciting new contest! Write Honeywell for further information on how you can participate.



# - DAY TRIP FOR TWO IN THE MERMAID<sup>TM</sup> CONTEST!



## We're giving you plenty of help!

Once you've joined Honeywell's big "Put-Yourself-in-Hot-Water" Club, you'll receive by return mail a power-packed merchandising kit, designed to help you sell more and better water heaters. This kit includes: (1) a set of 10 selling tips on 3 x 5 cards that will help you merchandise and sell more water heaters; (2) a sample of a glamorous, 20-page, 4-color brochure that tells the housewife how a proper supply of hot water can lighten her work (additional quantities can be ordered with either a Honeywell message or a product message from your supplier imprinted within); and (3) a sample of stickers, to be personalized by yourself, that can be placed on water heaters when making service calls (these stickers list the trouble spots the consumer should watch). An order blank is included for additional quantities of any of the above.

Here are truly the world's finest water heater controls. Available in both standard (V5130) and deluxe (V5131) models, the no-stoop, no-squat settings are located on top (where settings should be located). This makes it easier-than-ever to change water temperature from hot to warm, or in between. Both models are available with long or short element or tube—with or without pressure regulator.

## Honeywell



*First in Control*

SINCE 1885

### HONEYWELL'S "NAME-THE-MERMAID" CONTEST P.O. BOX 431, CHICAGO 77, ILLINOIS

Here's my entry for the Honeywell "Name-the-Mermaid" Contest and my wholesaler salesman's name, if he has helped me complete my entry. I agree to try and sell a new water heater on every call, or leave a reminder sticker where a new heater is not needed; to try and sell a unit of better quality to every water heater prospect; to use all merchandising aids supplied by my manufacturer and Honeywell. ☐ Already have Merchandising Kit. ☐ Need Kit.

(Name for Mermaid) \_\_\_\_\_

(Wholesaler's Salesman's Name) \_\_\_\_\_

(Wholesaler Firm Name) \_\_\_\_\_

(Wholesaler's Address) \_\_\_\_\_

(City) \_\_\_\_\_

(Zone) \_\_\_\_\_

(State) \_\_\_\_\_

Most of my water heaters are \_\_\_\_\_ brand.

Signed \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

# BIGGER PAYLOAD DELIVERY UNITS

**2500 WG Units  
Weigh Under  
23,000 Pounds  
LOADED!**

(Under 13,000 lbs. Empty)

Available In Twin or Single Barrel Models

## BALANCE YOUR LOAD

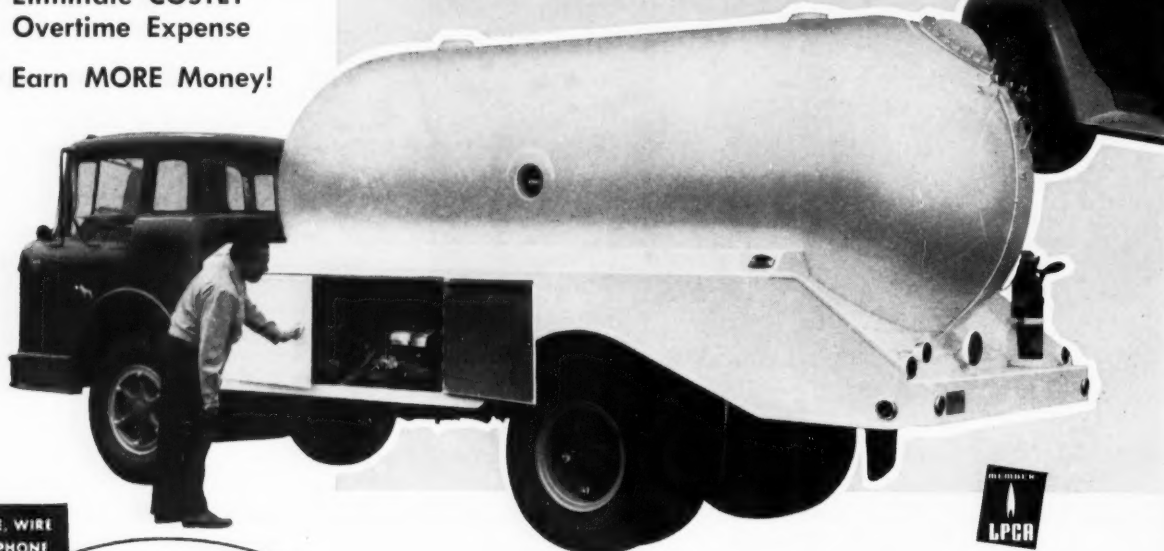
### THE *Nor-Tex* WAY

- ★ Deliver EXTRA Gallons Each Trip!
- ★ Work FEWER Hours!
- ★ Drive LESS Miles!
- ★ Eliminate COSTLY Overtime Expense
- ★ Earn MORE Money!

## In Four Popular *Nor-Tex* Models

Bulk plant operators everywhere are praising these sleek, LIGHT-WEIGHT, stream-lined twin or single barrel Nor-Tex LPG Delivery Units. Nor-Tex original ALUMINUM SKIRTING and CABINETS and engineering designs have reduced over-all weight. Even 3000 WG units and over, available for use on cab-over or cab-forward trucks, are still within the 18,000-lb. axle limit. With custom designed Nor-Tex high flow plumbing, these units deliver "extra" gallons faster.

For day in, day out efficiency, durability, payload, fast loading, high rated delivery, perfect balance and appearance Nor-Tex delivery equipment just can't be beat!



WRITE, WIRE  
OR PHONE  
FOR PRICES



## Manufacturers of Fine LPG Equipment

Whatever your needs... Trucks, LPG Truck Tanks, LPG Tractor and Motor Fuel Tanks, Filling Stations, new space-saving vertical "Rockets," LPG Storage and Domestic Tanks... we can supply a factory tailored Nor-Tex unit, designed and built by men with years of LP-Gas bulk plant experience. Anhydrous Ammonia Tanks are also available. Phone or write us. Interested attention, experienced assistance and helpful suggestions are always yours for the asking.

National Sales Agents for

# NORTH TEXAS

**HAUL MORE GAS  
... LESS STEEL  
Than Ever Before**  
IDEAL IN STATES  
IMPOSING TON MILE  
TAX

- ★ **STANDARD**
- ★ **PAYLOAD**
- ★ **CUSTOM**
- ★ **DE LUXE**



### **Nor-Tex ROCKET BOOSTING LPG SALES**

Everyone is talking about the extraordinary Nor-Tex Rocket. This attention-compelling, sales-boosting LPG Service Station is flexible to any type of installation... occupies only 72" diameter. Wire, write or phone for details.

**Nor-Tex**  
**LOW COST**  
**LPG**  
*Financing*  
A PLAN TO MEET EVERY NEED!

## **THE Nor-Tex STAR CUSTOM BUILT**

*with every desired feature in an above ground tank*

- ★ Nor-Tex construction exceeds all safety requirements.
- ★ Thoroughly buffed and cleaned for finest appearance.
- ★ The Nor-Tex STAR is completely fitted and ready for use.
- ★ Bottom outlets are standard on all above ground tanks.
- ★ Immediate delivery on one Nor-Tex STAR or a truckload.



Aluminum  
Skirting  
and  
Cabinets

### **BONUS SAVING**

As authorized new truck distributors Nor-Tex can save you hundreds of dollars on Internationals... Chevrolets... Fords... Diamond T and GMC's. Order any unit you need. You can't beat a Nor-Tex deal for all-around value.

## **May We Help You?**

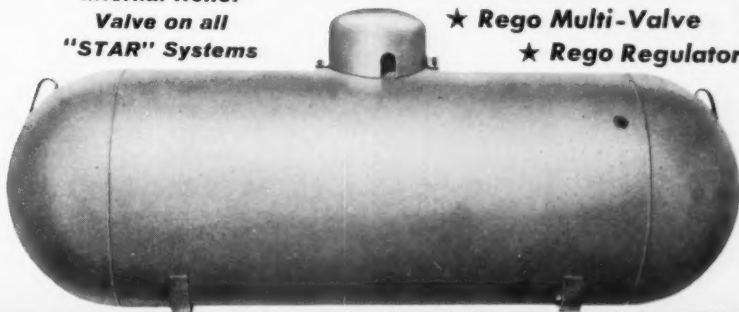
Here, at Nor-Tex, interested attention, experienced assistance and helpful suggestions are always yours for the asking. No obligation... give us a call.

**Internal Relief  
Valve on all  
"STAR" Systems**

★ **Custom Made Hood**

★ **Rego Multi-Valve**

★ **Rego Regulators**



# **TANK CO.**

P. O. BOX 1219  
DENTON, Texas  
DUpont 2-5416

## LOWEST PRICE?



## LOWEST COST?



## WHICH WILL YOU BUY?

There's never been a product that couldn't be imitated in surface appearance, made with less expensive materials and less attention to details, and sold at a lower initial price. The valve on the left, for instance, looks very similar to the genuine RegO at right. RegO customers have learned, however, that where dependability and performance are of importance, it's always false economy to

use any equipment but the best. RegO valves represent the extra quality that means complete satisfaction...job after job...year after year. RegO believes that service and value are more important than first cost—and their customers agree. That's one more reason why RegO has an outstanding reputation for top quality when you buy...complete on-the-job satisfaction for the years to come!



RegO No. 3103CO

Diaphragm cylinder valve for vapor withdrawal, with shut-off valve and integral safety relief valve. Used on ICC cylinders of 200 pounds propane capacity or less.



RegO No. 8103CO

O-Ring cylinder valves with exceptional sealing quality. For ICC cylinders up to 100 lbs. propane capacity. Low cost, yet excellent quality performance. Filling rate: 9.3 GPM at 10 PSIG differential!



RegO No. 3101CI

Multi-purpose diaphragm cylinder valves, for liquid or vapor withdrawal service where separate safety relief valve is provided. Standard service line valve for individually fitted ASME systems.



RegO No. 2547

Plumber's pot valve with built-in FINE FLAME control...used on 20 lb. LP-Gas cylinders as shut-off, control valve, and as adapter for plumber's melting pot tripod.



RegO No. 7149R

Tamper-proof, for safety and security for LP-Gas field equipment. Includes safety relief valve, excess flow valve in the inlet and tamper-proof back check valve in outlet.



RegO No. 8180

For lift truck cylinders. Combines cylinder valve and Safety Check Connector in one compact unit. Includes O-Ring stem seal, back seat feature, top-quality forged brass body.

# REGO

For complete details and prices write:

The **BASTIAN-BLESSING** Company

4201 West Peterson Avenue, Chicago 46, Illinois, Dept. 31-D

DO YOU KNOW  
it will pay you  
dividends to join!

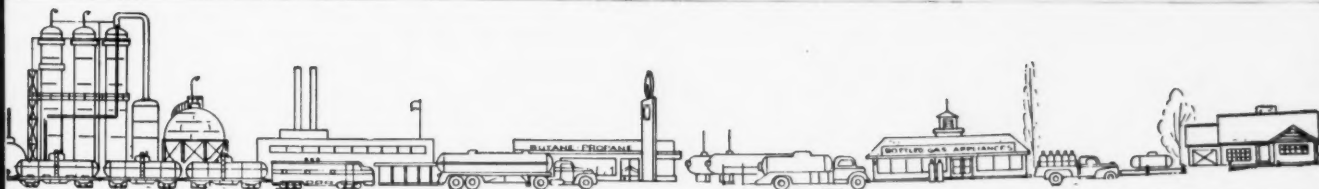


BUTANE-PROPANE News



# HIGHLIGHTS

BPN



How's the new year shaping up? With the steel strike and other unfavorable factors, it got off to a stumbling start. But, a survey issued in mid-March by the U. S. Department of Commerce is very optimistic, expecting overall business expenditures to be 14 per cent over 1959.

Similar optimism for '60 was voiced in early March by Robert C. LeMay, chairman of GAMA's industrial equipment division. LeMay predicted industrial gas processing equipment will be up over 10 per cent, reaching \$75 million.

That stumbling start was reflected in January gas appliance sales. Water heaters, dryers, furnaces, vented recessed wall heaters, room heaters and other direct heating equipment, and floor furnaces were down from January 1959. Not stumbling at all and probably more indicative of the rest of '60 were: residential boilers, up 9.1 per cent to 6608; conversion burners, up 6 per cent to 7100; and unit heaters and duct furnaces, up 5.8 per cent to 12,800.

Another bit of optimistic evidence is the entrance of a new name in the air conditioning field, Raypack Co. Inc., El Monte, Calif., manufacturer of central heating boilers. Raypack's air conditioning line will consist of air handling units and water chillers for hydronic heating and cooling systems. Emphasis is on valance and radiant panel ceiling installations with dehumidified and tempered air.

Indicative of the prosperity large LPG merchandisers are enjoying are recent reports from two large companies, Suburban Gas, Pomona, Calif., and Superior Propane Ltd., Toronto. For the nine months ending January 31, Suburban's earnings jumped 74 per cent while sales gained 35 per cent. Sales of \$10,374,066 netted \$1,199,995 profit. For the year ending November 30, Superior's earnings jumped 23.9 per cent while sales gained 18.8 per cent. Sales of \$7,433,597 netted \$409,019 profit.

One large LPG merchandiser ran into difficulties, however. On March 2, the Federal Trade Commission charged General Natural Gas Corp., (Monticello, N. Y.) and one of its subsidiaries, Sungas Products of Pennsylvania Inc. (Scranton), with employing unlawful pricing practices to sell LPG. The complaint alleged that the respondents, charge some customer companies \$4.95 per 100 lb. cylinder while others pay \$10 to \$12. Some of these customer companies, the complaint states, are wholly or partially owned or controlled by the respondents and compete with other customer companies.

Financing seems to be the last hurdle for the Mid-continent Eastern (LPG) Pipeline. Authorization for a public sale of securities has been sought from the Securities & Exchange Commission. Only part of the \$72 million project will be publicly financed, Prudential Life Insurance Co. having reportedly agreed to put up \$45 million. Construction will start in April, if approval has been granted. Proposed completion date is December 1.

Three new underground storage caverns were announced within three days in early March. Work has already begun on the smallest, a 4-million-gal. salt dome storage well near Moab, Utah. The builder, Suburban Gas, Pomona,

*Continued on next page*

Continued

# HIGHLIGHTS

Calif., thus becomes the first western LPG firm to use underground storage. To be completed in August, the cavern will hold gas purchased in New Mexico for western Colorado and eastern Utah markets. Continental Oil Co., Houston, expected to start within two weeks on an 8.4-million-gal. cavern near Ponca City, Okla. The \$1.27 million project will enable Conoco's Ponca City refinery to store excess propane during the summer for peak winter demand instead of using it as plant fuel. Another large producer, Sinclair Oil & Gas Co., Tulsa, announced it would start within 90 days on a 4.2-million-gal. salt dome near Hutchinson, Kan., if core tests prove successful.

A gray-hair-producing item from Oklahoma is a "charity trust" plan by which natural gas would be piped to tiny communities where it could never pay its own way. State taxpayers would make up the difference. The courts have reportedly turned down such proposals, but proponents are finding new loopholes.

New development--At the request of the Chicago Transit Authority, Phillips Petroleum Co. is making a heat-exchanger-pressure-regulator to overcome engine knock. Installed in the carburetor intake air duct, the unit uses the cooling effect of vaporizing LPG. Successfully tested on dynamometers and passenger cars, it will soon be tried by Chicago's LPG-using buses.

Awards and celebrations . . . An award has been presented to Tuloma Gas Products Co. by the Oklahoma Advertising Federation for an 11-piece direct mail campaign that went to nearly 1000 LPG dealers around the country. . . . Celebrating its 60th anniversary, Coleman Co., Inc. is promoting heating and air conditioning sales by giving with each purchase a Coleman gas light modeled after the company's original Boulevard Lamp, which went out of production in 1914!

A one-man "utility division" has been set up by Petrolane Gas Service Inc., Long Beach, Calif. Robert O. Randall, formerly with the California Public Utilities Commission and Southern Counties Gas Co., will engineer and plan the firm's two utility operations at Twentynine Palms, Calif., and Carson City, Nev. He will also study future possibilities for establishing other franchised utilities.



## CURRENT L. P. GAS & L. R. GAS PRODUCTION & INVENTORIES

(A. P. I. figures - in thousands of gallons)

	Propane	Butane	Bu-Pro Mix	Iso- Butane	Other Mixes	Total LPG	Total LRG
<b>Production (U. S.)</b>							
Feb. '60.....	368,529	189,495	48,482	62,374	62,968	731,848	244,397
Feb. '59.....	283,795	169,090	53,562	49,092	47,514	603,053	209,389
<b>Inventories (2-29-60)</b>							
Zone A.....	6,682	1,825	18	—	10	8,535	11,495
Zone B.....	44,506	5,204	—	1,384	1,063	52,157	9,056
Zone C.....	37,062	30,435	486	5,707	—	73,690	8,005
Zone D.....	44,785	5,360	9,502	2,302	103	62,052	909
Zone E.....	68,999	46,348	582	14,220	21,562	151,711	40,695
Zone F.....	122,900	41,946	1,026	21,340	46	187,258	540
Zone G.....	4,183	370	8,871	—	58	13,482	879
Zone H.....	813	307	175	177	121	1,593	25,980
U. S. ....	329,930	131,795	20,660	45,130	22,963	550,478	97,559
U. S. (2-28-59)	240,994	93,640	21,143	46,866	4,242	406,885	83,730

In celebration of our 60th year of world-wide progress...

## A Genuine Coleman gas-lite

Yours to give now as a  
"buyer's bonus" when  
you install



### America's Only Bonded Line Heating and Air Conditioning

This new Coleman Gas-Lite is the key to the most complete and most exciting business-building program ever offered through heating and air conditioning dealers. Most complete because it includes every imaginable aid to selling. Most exciting because it gets an enthusiastic response from everyone in the market for heating or air conditioning.

Here's the plan. As an anniversary salute, we're making it possible for you to offer a genuine Coleman Gas-Lite to your customer with the installation of any Coleman central furnace, wall heater, floor furnace or air conditioner. It's an offer your prospects will go for when you give them the lamp as a bonus for buying now! For more information, use the coupon below or call your Coleman distributor for your complete program kit containing full details—right away!

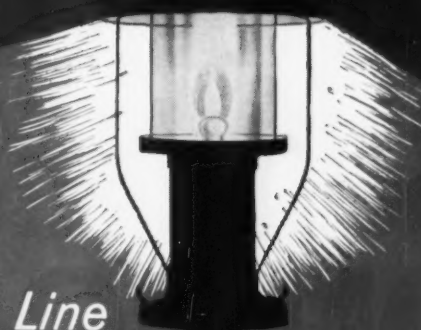


Best selling tool of all—you offer this exclusive \$500 bond with every unit you sell

Coleman's Gas-Lite promotion will be announced to home owners in the March 26 Saturday Evening Post



Also makers of famous Vit-Rock water heaters, Decorama space heaters, Coleman lanterns, camp stoves, jugs and coolers—mobile home heating and air conditioning



Works on any  
gas—installs 4 ways  
Can be mounted  
on post (as at left)



Will illuminate any



Can be mounted on table



Can be mounted on wall  
with decorator bracket

• The Coleman Company, Inc., Wichita 1, Kansas

Quickly send more information on your Gas-Lite promotion.

• Name \_\_\_\_\_ Title \_\_\_\_\_  
• Firm Name \_\_\_\_\_  
• Address \_\_\_\_\_  
• City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_



# PROVED WHEREVER BUSINESS BANKS ON GOOD TIRES



TRANSPORT\* ALL TRACTION\* \*FIRESTONE T.M.

**FIRESTONE PERFORMANCE PAYS OFF WITH LOW-COST-PER-MILE LP GAS DELIVERIES!**

Firestone tires' low-cost-per-mile is reflected in performance records of thousands of trucks across the country. That's because 425,000,000 tire miles a year in Firestone's own tire testing program prove Firestone truck tires are your best buy! This vast tire testing program resulted in Firestone Rubber-X, the longest-wearing rubber ever used in Firestone truck tires. It also resulted in Firestone Shock-Fortified cord which means extra miles of service out of every tire. Get performance proved Firestone truck tires, on convenient terms if you wish, at your nearby Firestone Dealer or Store.

## Firestone

**BETTER RUBBER FROM START TO FINISH**

Copyright 1960, The Firestone Tire & Rubber Company





# WASHINGTON REPORT

by NEIL REGEIMBAL, Washington Editor



## ★ Retirement fund tax relief gaining in uphill fight

Political experts now give self-employed persons a 50-50 chance of winning tax relief to help them set up retirement funds. In the past, the proposal has been flatly opposed by the Treasury Department because of the immediate loss of revenue. But the agency now is modifying its stand, and will not oppose a plan which is a little weaker than the House-passed measure pending in the Senate. Pending measure would permit self-employed persons to defer paying taxes on funds put in accepted retirement plans (up to \$2500 a year or \$50,000 in a lifetime) until the funds were withdrawn.

## ★ Look for another boost for TVA

Government's massive Tennessee Valley Authority is building up to another major expansion. Now, it's talking about a huge new coal-steam generator plant for Kentucky. New plant would cost \$100 million, and would use 4 million tons of coal a year from the depressed mining areas of Kentucky's coal counties.

## ★ Carrier competition battle flares anew

Battle between various carriers over government's transportation role is flaring again. No major congressional action is expected this year. But red-hot debate may set the stage for action in 1961. Fight involves how much competition should be permitted between types of carriers. A new Commerce Department transportation study is up for discussion.

## ★ Administration pushes for abandonment of unemployment "experience ratings"

Businessmen are preparing to fight proposals expected to get serious congressional study this year to set federal standards for state unemployment compensation programs. Plan, backed by the Administration, is to abolish present "experience rating." This would make all employers pay the same tax. At present, firms with low turnover and thus low unemployment compensation claims by former workers, get a tax reduction.

## ★ Tax the co-ops—but how?

Lack of agreement over the best method of applying income taxes to cooperative income could snag action this year.

Support for some new legislation closing an existing loophole which permits most co-ops to avoid paying taxes is almost universal. (Except for the co-ops themselves.) But there are almost as many suggestions on how to go about it as there are backers of the proposal.

Proprietary members of the LPGA urged the House Ways & Means Committee at hearing in mid-February (see March BPN) to apply ordinary corporate taxes on the entire net income of co-ops. They opposed any exclusion from income for patronage refunds.

The powerful American Farm Bureau Federation, speaking for farmers as members of co-ops, urged that cash refunds paid co-op members be taxable to the member; that any certificates for refund have a stated cash value and also be taxable to the member, and that all retained profits be subject to the normal corporate tax.

Eisenhower Administration officials favor requiring all co-ops to either redeem all patronage certificates within three years, which would be taxable to the member, or if not redeemed be taxable as income to the co-op. Congressional leaders would have all certificates considered as cash payments and taxable to patrons immediately whether or not redeemed.

# EXPANDING

## TO SERVE YOU EVEN BETTER



We'll be growing like sixty . . . in '60! More production, enlarged storage and increased transportation facilities mean even better service . . . Tuloma's Plus Service! Take Tuloma . . . and grow!

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#### TULOMA GAS PRODUCTS COMPANY

Pan American Building • Phone LUther 2-3261 • Tulsa, Oklahoma



# Beyond the Mains

By WILLIAM W. CLARK • Editor



## Don't make yourself liable!

It has been said that the law is, after all, a matter of common sense. It has its roots in logic.

The trouble is, the logic is not always self-evident. There is logic in the following quotation, but the accident records show that not all dealers readily perceive it:

"No licensee shall introduce liquefied petroleum gas into any container if he has knowledge or reason to believe that such container, piping, or the system, or the appliance . . . was not installed in accordance with the statutes of the state or the rules and regulations of the L. P. gas division in effect at the time of the installation.

"Entirely aside from wording in various regulations, this is the common law and must be respected by all concerned. Licensee should refuse service or disconnect service and immediately notify L. P. gas inspector of existing conditions."

This notice was broadcast by mail to its insured dealers by Pan American Insurance Co., on advice of its legal department. It's a healthy reminder to all dealers that the mere fact that an unsafe installation was made by someone else does not necessarily relieve them of liability for an accident if they service that installation.

The law, it seems, goes even farther at times in assigning culpability. L. E. Davis, PanAm's chief safety engineer, tells about a case which would seem to us laymen to strain the limits of logic pretty far:

It happened in Mississippi. Two truckers, employed by different firms, had stopped at a drive-in restaurant for lunch. When they were ready to leave, Truck No. 1 wouldn't start, so the driver asked the driver of No. 2 to give him a push.

This wouldn't work. So Truck No. 2 hooked on a tow chain and began pulling No. 1. He pulled it down a hill, but it still wouldn't start. When the two trucks reached the bottom, it was discovered that Truck No. 2 did not have sufficient power to pull No. 1 up the next grade.

What to do? Truck No. 2 pulled No. 1 off the road as far as possible, unhooked the tow chain, and the two men drove off in Truck No. 2 to seek help in the next town.

Because of the lack of room, Truck No. 1 was left with all wheels on the left-hand side extending over onto the pavement approximately 14 in. When an automobile came over the brow of the hill, it clipped the rear end of the stalled truck. At least one of the occupants was killed.

"The court," says Davis, "awarded \$59,000 damages. The driver of Truck No. 2 was found to be at fault for leaving a disabled and unattended truck."

The moral of this is that the law does not always protect the Good Samaritan. PanAm's legal department warns its insureds against pushing or pulling a piece of equipment belonging to someone else. Your kindheartedness may cost you dearly.

Doesn't it make you shudder to think of it?

## More proof: gas beats electricity

Want some potent proof of gas' cost advantage over electricity for heating, from an unbiased source?

Write the American Gas Association (420 Lexington Ave., New York City) for copies of "Gas vs. Electric Heating at Shingle Creek School." It's a reprint from an article which appears in the "Minnesota Engineer," and the price is 9 cents per copy.

The best part of it is the simple "break-even curve," which shows that ((for example) electricity at 1½ cents per kwh would cost as much for an identical heating job as 1000 Btu natural gas at \$2.86 per Mcf. Convert Mcf to gallons of LPG and you have a persuasive selling tool.

Harry Andrews, vice president of United Petroleum Gas Co., Minneapolis, thought so much of the report that he sent one to every customer in the company's north central area.



## ON THE MOVE!!

### PROPANE FROM SINCLAIR'S EAST CHICAGO REFINERY IS READY FOR DELIVERY!

The nation's newest and most modern LP-Gas recovery unit is now in operation at Sinclair's East Chicago refinery. The fully-automatic control and testing equipment assures production of the highest quality propane that meets all . . . and exceeds many NGAA specifications. Contracts are now being written to move this product to distributors in the mid-west market.

Take advantage of all the EXTRAS you get when you become a Sinclair TRUFLAME LP-Gas distributor. Sinclair's specialized engineering service; guaranteed delivery contract; highest quality product; and the tested TRUFLAME 50/50 Advertising Program can help you boost your sales for greater profits. Don't delay . . . Call TODAY!!



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APRIL 1960

**BPN**

## A rocketing LPG sales curve

EDWARD G. DICKSON

**S**PURRED by the development program at Patrick Air Force Base (administrative center for Cape Canaveral), the city of Melbourne, Fla., and its neighboring communities have grown in population from 10,000 to 50,000 in the last 10 years. This has meant a steady business expansion. Particularly, it stimulated home building to provide accommodations for families transferred to the area to contribute to the missile program.

Perhaps no business expansion in the Melbourne area has been more spectacular than that of DeKalb Natural Gas Inc. In less than three years, this firm, a subsidiary of DeKalb Oil Co., has rocketed from its launch pad to the rarified altitude of 2000 customers and more than 1.3 million gal. of LPG a year.

Morgan DeKalb, Phillips 66 oil jobber for Brevard County, has tied this LPG enterprise directly into the housing boom. More than 90 per cent of his installations are in new subdivision-type homes, individually-metered and fed by block supply systems. The rest of his business comes from substantial commercial accounts, such as laundries and restaurants, and from a delivery route servicing mobile homes.

"It's an operation which keeps us scratching for funds much of the time because of the large capital investment," DeKalb says. "But, it has advantages: close control over operating expenses, a substantial guaranteed per-customer gas load, and the promise of a fine return on the investment."

The combination of a gasoline-oil distributorship and an LPG dealership has its advantages, too. The two firms share a two-way radio dispatching sys-

*Serving the needs of the men who launch our mighty rockets at Cape Canaveral has given this LPG dealer a soaring sales trajectory.*



All-gas homes like these, supplied with propane from block-supply systems, provide the men at Cape Canaveral with every modern convenience.

tem. Accounting and billing for both companies are handled by the same equipment and personnel. DeKalb Natural Gas has its 30,000 gal. storage tank on the same property with DeKalb Oil's bulk tanks. Frequent interchange of personnel between the two companies equalizes peaks in work schedules. And,

the greater resources of DeKalb Oil back up its ambitious subsidiary's large investments.

In its housing project program, DeKalb Natural Gas is, in effect, in partnership with project developers. The company offers a service the builders need. In return, the builders push gas appliances to



Morgan DeKalb (left), president of DeKalb Natural Gas Inc., and his general manager, Stan W. Koller, check over charts of residential subdivisions where they have installed LPG block-supply systems.

guarantee a substantial load for DeKalb.

As a result, DeKalb has a fairly high average gas consumption for South Florida, where winter heating demands are not great. The average is 650 gal. a year. Some of the housing developments have all-gas homes. All must have a high proportion of gas appliances, or DeKalb will not supply them.

DeKalb was an executive plant pilot for Phillips Petroleum Co. for 10 years before he was appointed a Phillips jobber in 1954. He started his LPG operation in 1956 when there was only one such company in the area. He studied various forms of gas service and decided to concentrate on home developments.

After the first project was started, he saw that this operation "soon would get out of hand. And, because I knew very little about the LPG business, I started looking for someone who did."

He brought in Stan Koller, manager of a Hollywood, Fla., firm distributing both manufactured and L. P. gas, to head the LPG operation. Koller, who has since been made general manager of both the oil and LPG operations, planned and executed most of the LPG marketing activities.

Because of the immediate success of the program, DeKalb has been able to be quite selective in developing new business. Generally, only homes above \$15,000 are considered. Developers who will build in volume and will push gas appliances are preferred. The reason he can afford to be so selective is that there has been a large amount of building in the area.

"We have come to know most of the builders. We know the quality of their work and can tell just about what they will do," Koller says.

One developer, Taylor-Made Homes, has sold hundreds of houses in the area. A regular partner with DeKalb, Taylor-Made notifies Koller when a new unit is planned. It is understood that DeKalb will provide the gas service.

DeKalb Natural Gas now serves nine developments with underground piping systems. As a result of this "volume," Koller has been able to set up a sort of standard contract for projects. Although

## Sales curve . . . With the exception of "parts out of warranty," service is free

it varies with individual subdivisions, the general provisions are about the same:

1. DeKalb Natural Gas agrees to put in gas service, using a block supply system with individual house meters, at no cost to the home-owner or the builder. ("Our cost averages about \$125 a house.")

2. The builder, in return, guarantees a substantial gas load through inclusion of as many gas appliances as the two "partners" agree can be sold in that particular subdivision. In most cases, the builder agrees to show only gas appliances in his models, and gets them at cost.

Showing gas appliances in models does not necessarily mean the prospective buyer will accept gas throughout the house, so some builders offer electrical appliances optionally. ("It is sometimes difficult to convince an electronics engineer that gas is best for cooking. On the other hand, he probably will agree that gas is best for heating water.") Thus, DeKalb does not necessarily get the entire fuel load, but is assured of a good load on each block supply system.

3. DeKalb, through easement agreements with the developers, gets exclusive gas piping rights.

4. DeKalb agrees to provide 24-hour free gas service, lighting pilots, adjusting burners, and performing similar services,

("While there is a cost involved, we recognize that we are dealing with high-class families and are protecting high-class builders. Many missile family husbands are away for long periods on assignment 'down range' and their families feel more secure knowing that Dad needn't be there to get the serviceman out at any time.

"With the exception of parts out of warranty, our service is free. With straight propane and top-name, well-built equipment, free service is not expensive. The cost averages \$200 per month for

all of our customers, including the tremendous job of turning on and off central heating units at the start and end of the heating season.")

An occasional contract refinement specifies that DeKalb bill and collect sewage disposal charges as part of its gas billing. Some of the builders have been required to put in sewage disposal plants to make the developments conform to health standards. Freeing them from the bookkeeping involved adds a little, "but not much," work to DeKalb's accounting. The sewage charge is a flat one, added to each gas bill.

Block supply systems provided the best answer, both for DeKalb and the builders. They build a block at a time, and the system for a block can be put in as needed. Mains are laid in the same easement areas provided for utilities, usually running through the center of the block, between two rows of houses.

"We decided early to use only top-grade materials and men," Koller says. "And we have had almost no trouble that could be traced to installations."

The usual block installation, serving 20 to 24 houses, is supplied by a 1000 gal. underground tank, under a two-stage regulator system. Galvanized pipe,  $\frac{3}{4}$  to  $\frac{1}{2}$  in. is used. Occasionally 500- and 100-

gal. tanks are used as supplemental supply sources. A typical system is shown in the accompanying diagram. Safety valving follows Pamphlet 58 and includes pop-offs, etc.

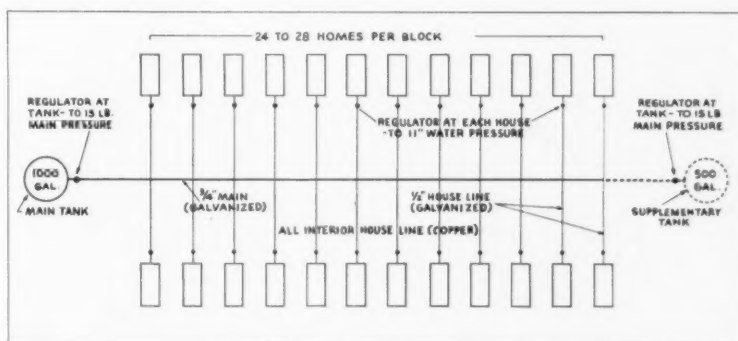
A considerable amount of equipment goes into one of these projects. One Taylor-Made tract, for example, involved 406 homes, meaning 406 vapor meters (Rockwell No. 00) and 406 service regulators (Rego 2403 with reverse bonnet). Among the other items required were 27 underground tanks (14 1000-gal. and 13 500-gal.) and 27 high-pressure regulators (12 Fisher 722v's and 15 Rego 1586's).

The company was assisted by the engineering department of Phillips Petroleum in the system design. Engineering firms employed by several developers verified the suitability of the system.

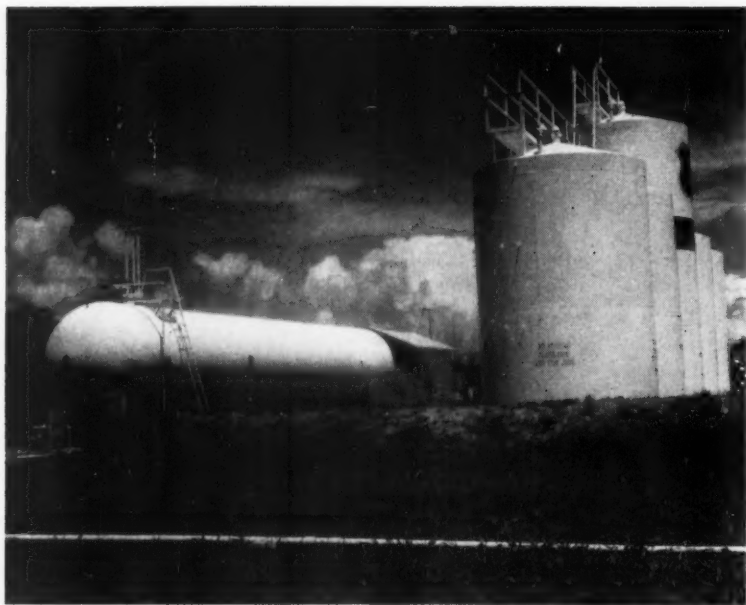
"Including our longest runs, we have experienced a maximum pressure drop of 1 lb, regardless of weather conditions," Koller says. "The mains carry a pressure of approximately 15 lb at all times."

The ease with which the company keeps these systems replenished is indicated by the fact that it uses only two tank trucks—one 2000 gal. and one 1400 gal. (A third 500-gal. truck is used exclusively for servicing trailer parks.)

"Florida has tremendous fluctuation in gas usage because of the small number of heating days," Koller says. "Consequently, if a company has adequate rolling stock to take care of cold periods under an individual delivery system, this



Here's a diagram of a typical block supply system, with the supplementary tank shown by dotted lines. While many blocks are rectangular like this, some projects have curving streets that produce irregularly shaped blocks.



The 30,000-gal. storage tank at left is the source of supply for all DeKalb block systems. Only two trucks, with a combined capacity of 2400 gal., are needed to serve the 2000 customers. The close partnership of DeKalb's oil-gas and LPG operations is illustrated by their combined storage facility.

same equipment stands idle 80 per cent of the year. With block systems, 24 customers may be served at the same time and at our convenience. Because they are caught

before they are out of gas, you can have a smooth operation regardless of weather fluctuations.

"A card has been prepared for each underground tank and each



The only evidence of storage at the block system, itself, is this surface installation, here checked by DeKalb.

delivery is posted by date and gallonage. It becomes very easy to route your trips with peak efficiency."

Seasonal fluctuations in gas consumption are illustrated by the following average customer usages. (The first quarter was colder-than-normal and the last quarter was warmer-than-normal.): January, 312 lb; February, 428 lb; March, 306 lb; April, 171 lb; May, 93 lb; June, 99 lb; July, 84 lb; August, 75 lb; September, 78 lb; October, 77 lb; November, 103 lb; and December, 131 lb.

The success of the housing project program has made it unnecessary to advertise or use salesmen. However, DeKalb stressed that the investment has been heavy: "We're still reinvesting all our returns into the LPG operation until the time when it will completely pay its own way."

How soon will that be?

"The fact that two completely different operations are tied together makes the answer to that question a calculated guess," says Koller. "There is no doubt in our minds that the LPG operation has always paid its own way and has always been a big money-maker with healthy percentages of profit to investment. But, it has relied on the gas-and-oil operation to continually furnish the additional money needed to expand over and above its own capabilities."

And what happens if "The Cape" closes down?

"The missile base, of course, represents a calculated risk," Koller admits. "But we feel this area is fast becoming a part of the Gold Coast of Florida. It's a vacation paradise."

DeKalb and Koller are not sitting around waiting for the area to develop into a tourist attraction. They, along with Assistant Manager Bill Click, are active in community activities.

"We take pride in our community work," DeKalb emphasizes.

The former executive plane pilot, former test pilot, former college football player can also take pride in the aggressive expansion program that dotted Brevard County with Phillips service stations and supplies gas to the homes of the men who man our No. 1 missile base. ■



## Automatic controls for LPG heating equipment: Part 3



## How basic systems are "refined" to give greater comfort

The preceding article of this series described the basic automatic controls for the L. P. gas heating industry. This article describes some of the deluxe control systems and refinements that can be utilized to provide even greater comfort, control, and convenience for the home owner. Next month: Some basic techniques for handling heating problems in LPG systems.

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Minneapolis-Honeywell Regulator Co.

**T**HE basic "automatic" systems already discussed provided sufficient control convenience to satisfy most people during the growing years of the control industry. However, as heating systems improved, homeowners' automatic control demands also grew. The control industry was quick to respond to these demands by providing systems that gave even greater comfort and convenience. Let's review some of the areas in which these demands have been made.

Most people prefer lower temperatures for sleeping comfort. With the basic system this means they must turn the thermostat to a lower setting when they retire—a mild inconvenience. This also means that when they get up in the morning the house is too cool for daytime comfort—a not-too-mild inconvenience. To raise the temperature to the normal day-comfort-level, they must manually set the thermostat higher and wait for the warm-up period.

To provide cooler sleeping temperatures, and still allow the occupants to get up in a warm house, a method for returning the thermostat to the warmer daytime temperatures after manual night setback is

needed. A thermostat with a hand-wound timing device provides this type of semi-automatic day-night operation (Fig. 1). The operation is semi-automatic because night setback is manual, while the morning pickup is automatic.

Operation is simple: a manually-turned dial is set for the number of hours that the lower temperature

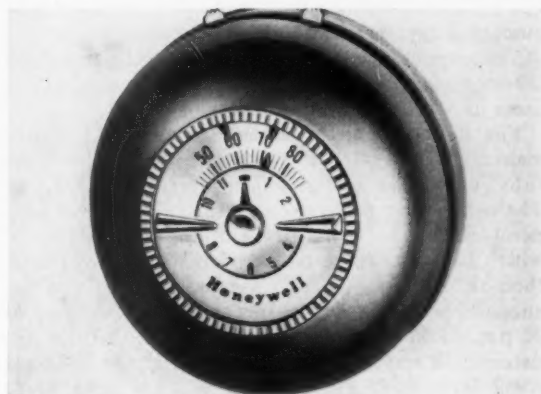


Fig. 1. Thermostat with hand-wound timing device provides semi-automatic day-night operation. Manually set back at night, it picks up automatically in the morning.

## Electric clock-controlled

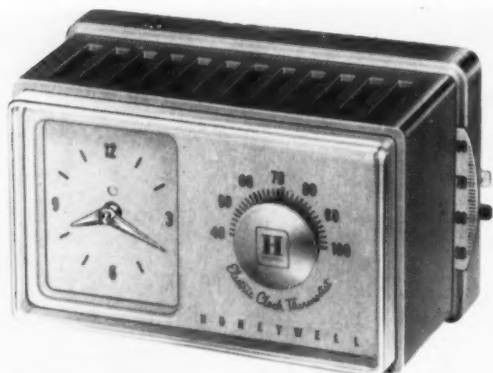


Fig. 2. Fully automatic night setback and morning pickup is achieved with this electric clock-controlled model.

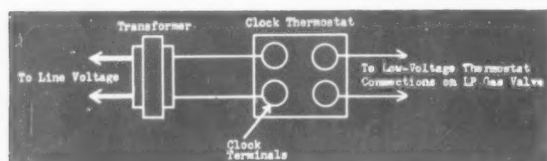


Fig. 3. Wiring diagram for typical electric clock thermostat. The only additional wiring needed is a separate transformer to operate the clock mechanism.

is to be maintained. This dial activates a clock mechanism which shifts the thermostat setting to a lower temperature. At the end of the pre-set period, the thermostat automatically returns to a higher setting, where it remains until manually lowered again.

This type of thermostat is provided with two temperature-setting levers: one set at the lower temperature, the other set at the normal daytime comfort temperature.

Another advantage of this semi-automatic setback control is that if the occupants leave the house for a period of time (either day or night), the temperature can be set back for the number of hours that they plan to be gone. By doing this they will maintain a lower temperature while the house is unoccupied; but upon their return, the home will be warm due to automatic temperature pickup.

The setback mechanism is an integral part of the thermostat. Installation and wiring are exactly the same as with the standard thermostat.

For more complete setback automation, control manufacturers offer a "setback" thermostat with fully automatic electric-clock operation (Fig. 2). The homeowner merely selects the two levels of temperature that he wants to maintain, and the time at which he wants these temperatures to prevail; from then on the action is fully automatic. For instance, suppose he would like to lower the temperature at 11 p.m. to 65 degrees and have it return to the pre-determined daytime setting by 7 a.m. He sets the night lever at 65 degrees, and sets his timer mechanism to shift to night setback at 11 p.m. Then he sets his clock mechanism for morning pickup at 7 o'clock. The thermostat would actually start call-

ing for heat a short time before 7 o'clock so that the temperature would reach the daytime setting by 7. The thermostat will automatically shift these temperatures each day and each night as long as the homeowner does not change the setting.

If, for some special reason, he would like to maintain the day temperatures later in the evening, he simply moves the night setting lever up to the daytime temperature. This temperature will then be maintained until the night setting is lowered. On the other hand, a lower (night temperature) setting could be maintained by moving the day-temperature selection lever to the night-temperature setting.

Shown is a typical electric clock thermostat. The only additional wiring and installation involved when installing this type of thermostat is a separate transformer to operate the clock mechanism (see Fig. 3).

Setback thermostats provide automatic control of indoor temperatures for increased comfort. However, maximum comfort also depends on the sensing and compensation of outdoor weather conditions. This is due to two major factors.

First, as outdoor conditions become more severe, the walls of the structure become cold. This causes heat to be transferred from the occupants, by radiation, toward these cold walls. Thus, even though the room air temperature may be at a comfortable level, the occupants feel cold due to the radiant heat loss

## Indoor-outdoor hookup



Fig. 4. This glass-domed thermostat, mounted outside house to sense normal effects of wind, sun and temperature, compensates for outdoor weather conditions.

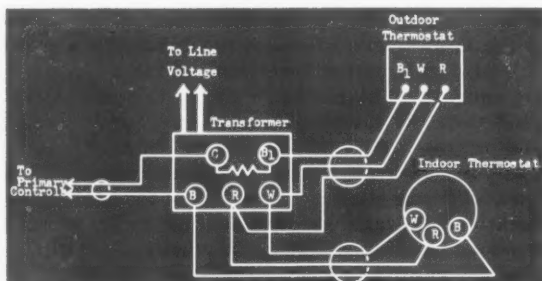


Fig. 5. Wiring diagram shows how outdoor compensating system is tied into basic thermostat setup. Only additional wiring required is from outdoor thermostat to indoor thermostat and the transformer.

## Zone heating with warm air

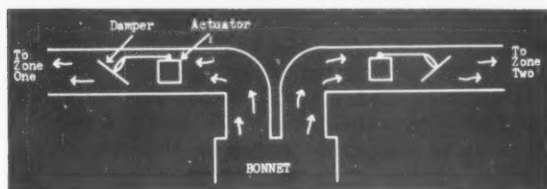


Fig. 6. Diagram of modulating air-volume control system shows how damper in each zone is actuated independently by its own actuator.

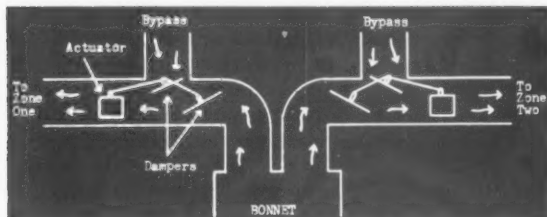


Fig. 7. Diagram of modulating mixed-air system showing how mixing dampers blend portions of heated air with air taken from the return system. Again, each zone operates independently.

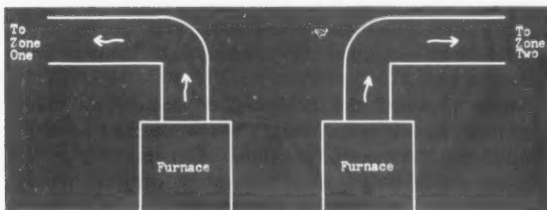


Fig. 8. A third method of zone heating—the two-furnace method.

Secondly, if there is a sudden change in outdoor conditions there is a natural time lag between the change in the outdoor conditions and the time that the thermostat senses the change in indoor conditions.

In order to provide the occupants with maximum comfort regardless of outdoor conditions, it is necessary to have a sensing device, exposed to outdoor conditions, which will provide the necessary compensation. A typical means of providing this compensation is as follows:

A glass-domed thermostat (Fig. 4) is mounted outside the house where it will sense the normal effects of wind, sun and temperature. This thermostat acts like a small house with a built-in heating system; whenever the temperature of this outdoor thermostat falls below its set point, the bimetal sensing element makes contact. This energizes a small built-in heater, which heats the bimetal element to its set point (breaking contact). This cycling of the outdoor thermostat continues until the outdoor weather conditions are so severe that they lower the bimetal temperature to its design temperature (for example, 10 deg. F) at which time the outdoor thermostat contacts remain continuously closed.

The next step is to provide a method to increase

the indoor temperature as the outdoor weather conditions become more severe; or to lower the indoor temperature as the outdoor weather conditions become milder. To do this, the indoor thermostat must control at a higher temperature every time the outdoor thermostat contacts make due to more severe weather. Every time the outdoor thermostat contacts break, the indoor thermostat must control at a lower temperature.

A heater in the indoor thermostat is energized whenever the outdoor-thermostat sensing element is satisfied. The indoor thermostat is calibrated so that it maintains the room temperature as indicated by the thermostat setting when this reset heater is constantly energized. Should this heater become de-energized, due to the action of the outdoor thermostat, the heat that was being provided by the heater must be replaced by an increase in room temperature. This, in effect, raises the set point of indoor thermostat so that comfort is still maintained for the occupants of the room. The percentage of time the reset heater is de-energized determines the amount that the indoor temperature is increased to compensate for weather conditions.

This weather-compensated system is available with either the basic thermostat or the setback thermostats just described. The only additional wiring required is the wiring from the outdoor thermostat to the indoor thermostat and the transformer, a simple three-wire low-voltage cable as shown in Fig. 5.

The preceding paragraphs have described some of the refinements that have been added to automatic control for comfort in home heating. The control manufacturers have provided highly sensitive, accurate, and dependable thermostats to give the utmost in comfort. However, one thought must be kept in mind—the control applications we have discussed have used only one thermostat to control the temperature in all the areas in a home. Because the modern trend in home building is toward long, spread-out ramblers, split-level planning, and utilization of basement recreational or living areas, the problem of providing maximum comfort to all areas of the home has become more complex. Each area, having different conditions affecting its living comfort, requires a separate thermostat. The following typical conditions require zoning for proper comfort:

1. Zone when you have a split-level home.
2. Zone when you have a large glass area.
3. Zone when you have a finished basement or activity room.
4. Zone when you have rooms over unheated areas, such as garages.
5. Zone when you have a spread-out floor plan.
6. Zone when you want comfort matched to needs of living and sleeping; for example, it may be desirable to maintain a bedroom temperature of 68 degrees, while in the living area you may desire to maintain a temperature of 74 degrees.

**Zone control for L. P. gas forced warm air systems** is a relatively uncomplicated system involving two basic ideas. The amount of air (air volume) that is delivered to each zone may be varied; so may the temperature of the air delivered to each.

A modulating-air-volume system regulates the flow of heated air to each zone according to the demand of the zone thermostat. Each zone has its own supply system, and each zone thermostat operates a modulating damper-actuator which positions the damper in its zone supply (see Fig. 6). As the thermostat senses a need for more heat, the modulating damper-actuator moves to a more fully open position. As heating demand diminishes, the zone damper

## Zone heating with hot water

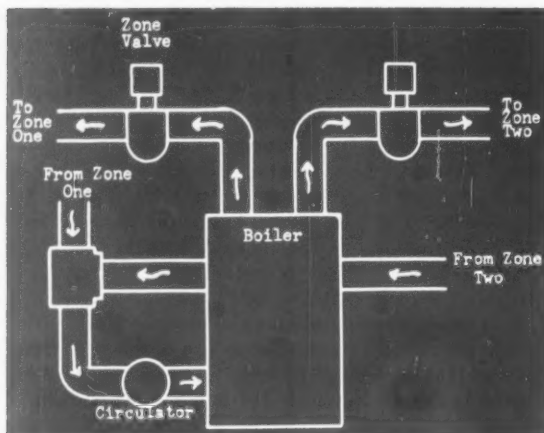


Fig. 9. Zone heating of a hydronic (hot water) system. This is most common method, utilizing zone valves and a single circulator. Space temperature requirements of zone are met by automatically increasing or decreasing the amount of time a full volume of heated water is supplied.

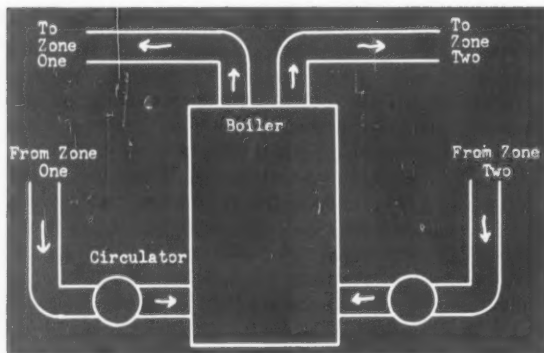


Fig. 10. Schematic of a zone system controlled by zone circulators. As each zone requires heat, the control system calls for operation of the zone circulator.

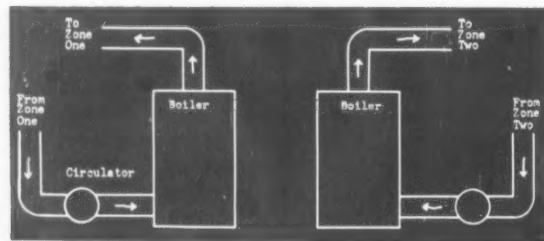


Fig. 11. As with the two-furnace hookups, two boilers can be used to give two-zone heating in a hydronic system.

gradually modulates toward the closed position. Therefore, the volume of conditioned air is slowly varied in relation to heating demands of each zone.

In a modulating mixed-air system, each zone uses mixing dampers (face and bypass dampers) which blend portions of heated air with air taken from the return system. This air, after it has passed through the fan, is bypassed around the heating chamber. One mixing damper is located in the zone supply duct and another in a separate zone bypass from the return (Fig. 7). Each set of zone mixing dampers is modulated by a damper actuator. Damper operation is continuous, with a gradual re-positioning of the mixing dampers in each zone.

This method blends conditioned air with recirculated air in just the desired amount. The system then discharges cooler or warmer air through the zone supply duct at the same rate at which warm or cool air is being lost to the outdoors. Distribution is continuous, and a uniform volume of air is circulated. The temperature of the supply air is continually adjusted according to the heating load.

In both systems, the air-supply temperature is regulated by a special indoor-outdoor plenum temperature regulator which maintains plenum temperature at the proper level as indicated by outdoor conditions. (This is not to be confused with the previously described indoor-outdoor system; it is a special stat designed for regulating bonnet temperature only.)

These systems are designed to handle as many zones as necessary to maintain the desired comfort conditions. Each zone functions independently of the others, which means that maximum comfort conditions can be maintained for each.

For those applications that require only two zones, and where economy is a major factor in installation, a system using only a single damper-actuator with inter-connecting linkage to both zone dampers may be utilized. This is a minimum-cost zone system in which the second zone can divert supply air as required. The thermostat in one zone controls the burner; the thermostat in the other zone controls the balancing dampers, and can also call for more burner operation. Should one area require more heat than the other, the dampers move gradually to supply more heated air to that zone.

In addition to the air-volume and modulating mixed-air systems, there is a third method of zone heating—the two-furnace method. Each zone is a separate and complete heating system in itself, containing a warm air furnace, heat-distribution means, and a thermostatic controller (see Fig. 8).

Zoning can also be readily provided for a hydronic system. The only difference is that in place of dampers for air-flow control, circulators or water (zone-control) valves are used to control the flow of hot water.

The most common of these two zoning methods is the control of zone valves, using only one circulator. With this system, space temperature requirements of the zone are met by automatically increasing or decreasing the amount of time a full volume of heated water is supplied. This is controlled by the zone thermostat, which, through a two-position mo-



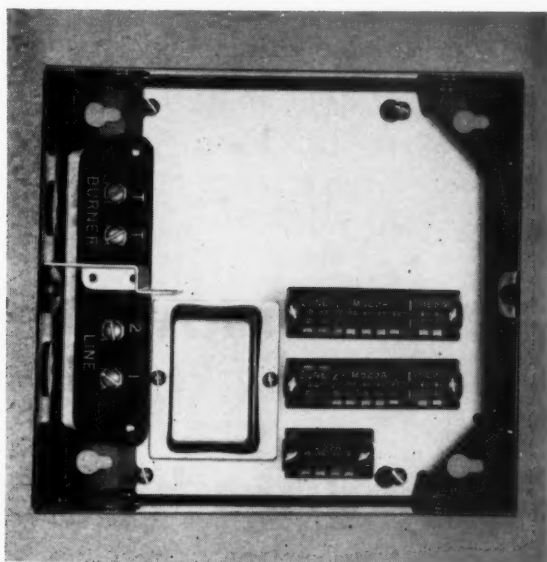


Fig. 12. Because of the great number of controls needed in zone systems, many control manufacturers provide central wiring panels for installation simplicity.

tor, opens the water valve as needed.

Each zone valve is operated by a thermostatic controller. The control selected depends upon the refinements desired, and whether day-night or manual control is required. Each zone control system operates a zone control valve and the system circulator through a relay. Each zone also has its own supply and return main. A single circulator, which operates whenever any of the zones require heat, provides circulation for the entire system. Fig. 9 shows a typical schematic outline of a zone control system utilizing zone valves.

Another method for providing hydronic zone control utilizes zone circulators—individual circulators for each zone. A separate supply and return main is again used for each zone. The operation of each circulator is controlled by a thermostatic zone-control-system, so that the temperature maintained in one zone is completely independent of any other zone.

As each zone requires heat, the control system calls for operation of the zone circulator. As before, the type of thermostatic control selected depends upon the degree of control refinement wanted. Fig. 10 is a typical schematic outline of a zone system controlled by zone circulators.

In both of the above systems, the required boiler-water temperature is maintained by a simple indoor-outdoor controller with one temperature-sensing bulb mounted outdoors and the other mounted in the boiler. This operates the burner to raise or lower the temperature of the boiler water in ratio to outside temperatures. This feature provides for an even flow of heat and prevents fuel waste and possible overheating by maintaining lower boiler-water temperatures during mild weather. As outdoor temperature drops, boiler-water temperature is automatically raised to meet the increased heat demand.

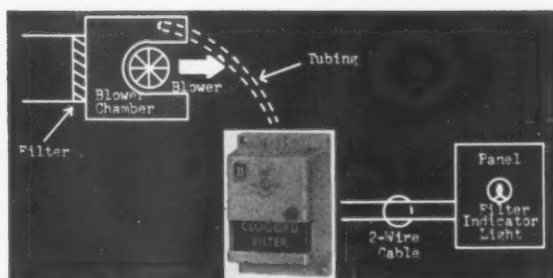


Fig. 13. How the clogged filter indicator is wired. Signal lamp may be connected in as shown.

As in the two-furnace system described for warm air applications, it is also sometimes desirable to provide two or more boilers for some specific installation. Each zone is designed as a complete heating system in itself, with a separate boiler, distribution system, and its own thermostatic control (Fig. 11). Each zone installation would be the same as any conventional hydronic system. Therefore no special controls are required.

Because of the greater number of controls used in any zone system, many control manufacturers provide central wiring panels for installation simplicity. These central wiring panels usually include clearly identified terminal blocks which provide easier installation wiring and simplified servicing of the control system. A typical central wiring panel is shown in Fig. 12. Note how clearly the wiring terminals are identified.

The homeowner can obtain any desired comfort level by combining the features of the above-mentioned control refinements. For instance, he can provide outdoor compensation with temperature setback. He can provide zone control with temperature setback. He can provide zone control with outdoor compensation. By combining these deluxe features he can obtain the degree of comfort required to meet the demands of modern living.

In addition to temperature comfort control, there are other control features that can be added to many of our modern heating systems that provide even greater convenience for the homeowner. All modern forced warm air systems require some manner of air filtering. Most systems include a mechanical dust stop which requires periodic cleaning or replacement. It is sometimes very difficult for the homeowner to determine, when this filtering device needs service. The only real indication is a slight decrease in air flow, which is not generally recognized until heating costs rise appreciably and discomfort exists.

To provide the homeowner with an indication of the need for filter cleaning or replacement, the control manufacturers have provided a sensing device which detects the need for this periodic service. The clogged-filter indicator gives visual evidence that there has been a decrease in air flow through the filter. It is possible to add electrical contacts to this indicator to turn on a signal lamp located at the thermostat or in a panel in the living area. An installation of this type is shown in Fig. 13. ■



## Unique movable expedites barge

Left, a water-level view of the movable dock which is mounted on 36-in. diameter steel wheels. The superstructure is built on a slant so that the 20 x 20-ft deck is level in whatever position on the river bank it is used. The dock is 10 ft high at the front or river level side and is lowered into the river 4 to 6 ft to expedite unloading.

Lower left, two derricks, with 150-ft booms, are mounted on the deck to handle the heavy liquid and vapor hoses. The hoses extend to the bank side of the deck and connect with take-off connections in the pipe trench. These connections are at several intervals to facilitate unloading at various river levels.

Right, this top-side winch dock ramp, with  $\frac{3}{4}$  in. cable lowers the dock to the desired level.



**I**N order to take advantage of barge movements of L. P. gas up the Mississippi River from sources in the Lake Charles, La., area, Cities Service Oil Co. built an L. P. gas terminal near Lake Village, Ark.

The Lake Village terminal is the only one of its kind on the Mississippi. Most docks used in L. P. gas unloading on the river are either the sparred barge type or the pile cluster type. Neither was practical for this particular site.

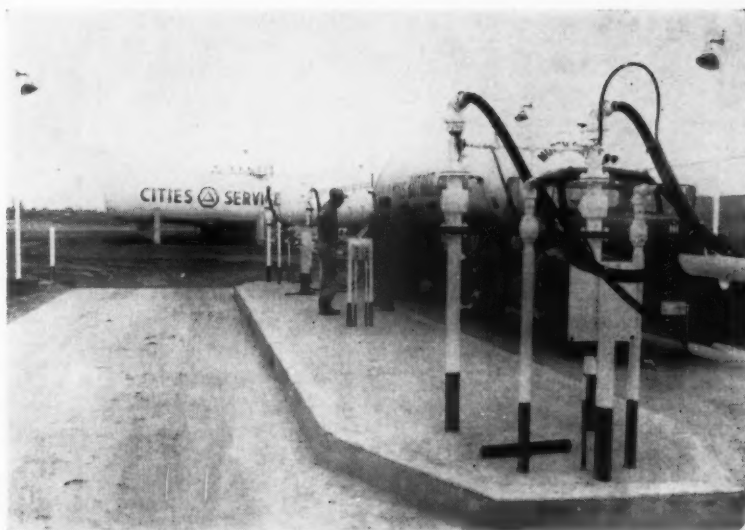
The company operating the terminal wanted a dock that could follow the rising and falling levels of the river so that unloading could take place under practically any conditions that might be encountered.

The unique movable dock shown on these pages was the result.

The terminal is completely modern in design

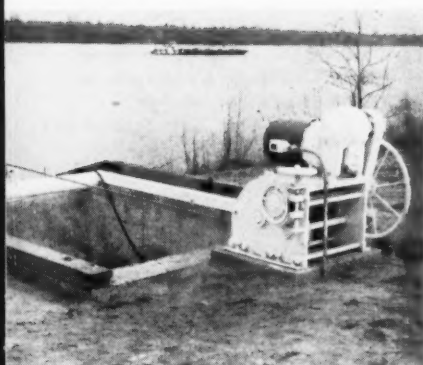
# dock

# shipments



Above, the big loading rack at the Lake Village Terminal can accommodate four truck transports at one time. Total loading capacity is 600 gal. per minute. The battery of 30,000 gal. tanks in the background is supplied with product barged up the Mississippi. (An expansion program scheduled to increase storage capacity by 50 per cent was announced the day the new facility was dedicated late last year.)

Below, because each hose is so heavy, cranes are used to connect them with the barge tank. The L. P. gas is forced through the hose and a 4000 ft pipeline to storage tanks.



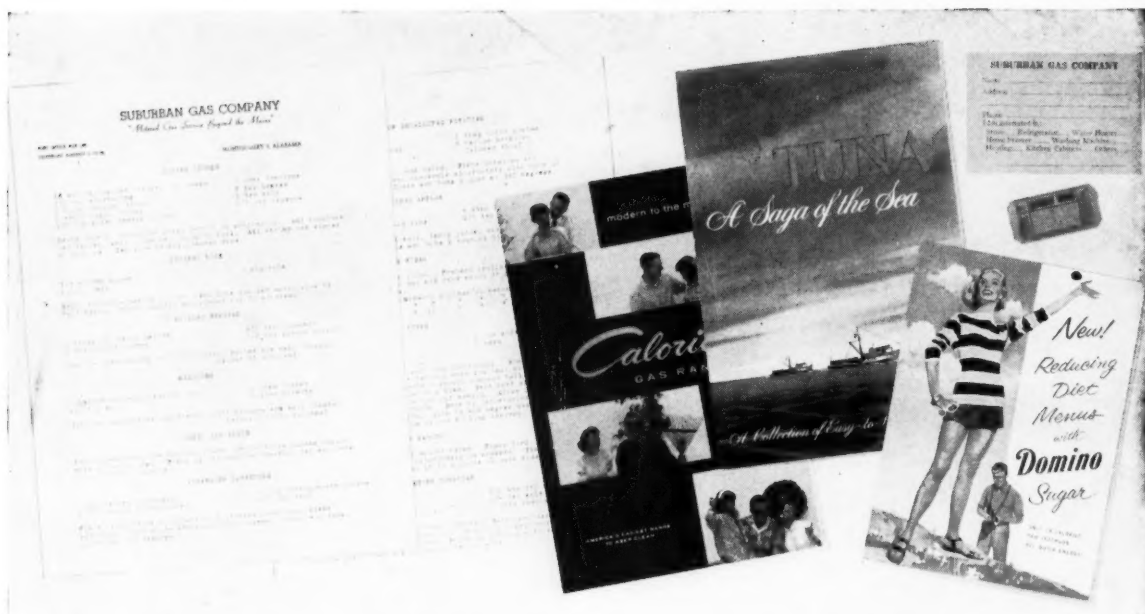
with all safety factors known to the industry built into it. A triple-action safety check valve can cut off supply, should a dangerous condition develop.

The terminal has 20 30,000-gal. tanks, giving it a total of 600,000-wg storage. Later this year the storage will be increased by at least 50 per cent, according to an announcement the day the facility was dedicated.

Although it was built by Cities Service, it will be operated by a lessee. General Gas Corp., one of the principal chains in the south and southeast, will be distributing gas from this point and its wholly-owned subsidiary, Propane Corp., is operating it as lessee.

Lamar Grisham, president of Grisham Butane Gas Co., is manager of the Cities Service-owned terminal. ■





These are the materials Bruce Barze uses in his highly successful range demonstration program. At left is the menu, mimeographed on both sides of Suburban Gas stationery. In the center are the pieces of literature passed out to the audience, a Caloric range

folder and recipe booklets supplied by the Tuna Research Foundation and the American Sugar Refining Co. At top right is the all important card used both for the door prize drawing and for developing sales leads, and the admission ticket.

## Range demonstration program proves to be a five-way success



Bruce Barze

**Around Montgomery, Ala., Bruce Barze has scored high with a high school demonstration program that:**

- Produces good will towards Suburban Gas Co.
- Makes central Alabamans more gas and Suburban Gas conscious.
- Helps high schools in five counties.
- Provides slow-season work for sales and service personnel.
- Does all this at relatively low cost.

A SIMPLE demonstration program that scores a five-way success sounds like a merchandiser's dream. Yet, that is just the sort of promotional feather that Bruce Barze, sales manager of Suburban Gas Co. (Montgomery, Ala.) can stick in his hat.

The program is really very simple. Using the services of a good cooking demonstrator, Barze stages demonstrations in 12 high schools around Montgomery, Ala. Home economics students in the schools sell tickets to the general public and refreshments to those attending. All proceeds go to the schools in the hope that the money will be used to buy a new range for the home economics class.

Here's the proof of the program:

- It has "definitely produced good will toward Suburban Gas." Says Barze: "We receive numerous words of thanks from people in the community for helping their school, their



kids, their home economics department." There is also the added good will that always results when gifts or prizes are given away.

- It has made central Alabamans more conscious of gas, particularly Suburban Gas. The firm receives a tremendous amount of word-of-mouth advertising. Says Barze: "The 12 schools we work with each have from 28 to 75 home economics students. These girls go all over their individual communities, talking to the people about "Suburban Gas Co. gas range cooking demonstration!"

- Each of the 12 high schools (located in rural communities in five counties around Montgomery) has benefited in several ways. First, the demonstrations usually bring in \$50 to \$75. Second, in 80 per cent of the communities, the superintendent of education has agreed to match, dollar for dollar, the amount that was raised. For six of the 12 schools, this meant a new range almost immediately. Third, the demonstration makes each community more aware of its local school and that school's problems and contributions to the community.

- The program provides additional work for the sales and service staff during the slow season, the first four months of the year. (The program is limited to this period.) Further, this work is provided in the proper proportion. Most of the additional work is for the salesmen, who find things especially slow during this period. Only a small portion of the added work goes to the servicemen, who—while busy—still find time to handle the extra load. The salesmen's work stems from following up the leads developed during the demonstration. The servicemen's job is merely to deliver and hook up three gas ranges for each demonstration.

- The program has accom-

plished all this at relatively little cost. Annual budget for the complete program is only \$900, or \$75 per school.

How did Barze go about setting up this paragon of programs? It began with "a lot of planning." The first real action came when Barze contacted the high school principals to explain his idea. During this conversation, he sought permission to talk to the home economics teacher. To her, he described in detail how the demonstration would benefit her department. He stated very plainly that he was anxious to equip her department with a modern gas range. He then explained how Suburban Gas would help the school get that range. However, he was careful to stress that the school may use the money in any way it sees fit: it does not have to go for a range.

Here is how the money is raised. Students in the home economics class are supplied tickets from a plain roll. (The dealer's cost is only \$1 per 1000-ticket roll.) Advance ticket sale begins two weeks before the demonstration. (Admission is 50 cents for adults and 25 cents for students.) Barze feels this advance push is very important and furnishes posters for the students to distribute to help publicize the event.

The students, incidentally, are completely responsible for ticket sales. It wasn't until late in the first year of the program (1958)

that Barze hit upon the idea of making the sale a contest. A \$5 prize for the girl who sells the most tickets "definitely got the girls behind the program." The winner receives her award during the demonstration. She is given a verbal pat on the back for helping her school and home economics department. At the same time, Suburban throws in a plug for itself, stressing that *all* proceeds go to the school.

In addition to ticket revenue, the students can raise additional money by auctioning cakes and cookies. They are also encouraged to sell refreshments at the demonstrations.

Ticket sales average 150 to 200 for each demonstration. Why do the citizens of the community pay to attend such a demonstration? Barze can advance at least two good reasons. "First, every penny goes to a good cause, and one that is "very close to home." Second, there is always a chance of winning one of the numerous awards. The door prize for the event is a cutlery set or silverware set that is advertised at \$59.50 (but Barze actually obtains these sets for only \$12.50). In addition, the dozen different foods that are prepared during the demonstration are given away in attractive dishes, along with a tray. Then food winners are determined by a drawing of registration cards filled out by the audience upon arrival. These cards



Suburban's home economist, Mrs. Lena Rush, (left), gives a private demonstration to a home economics teacher.

**"Our '59 Fords have logged over 80,000 trouble-free**



# miles with only routine, ICC-prescribed maintenance"

says **Ed Seaton, Jr.**  
President  
**Refiners Transport, Inc.**  
Nashville, Tennessee



**Refiners Transport, Inc.**, one of the South's leading common carriers, is licensed to haul liquid commodities in seventeen states. This progressive company leases its tractors from independent contractors and has always had more Fords in its fleet of tractors than any other make. Here is what Mr. Seaton has to say about them:

"In the 10 years we've been in business, we have had more satisfactory service out of Fords than any other vehicle in the same price class. They just don't require the repairs that other makes do and the '59 Ford F-1000 tractors seem to be the best yet. We haven't experienced any downtime with them and a couple have logged over 80,000 miles with no repair work on them other than our regular ICC-prescribed maintenance.

"The majority of our independent contractors

drive their own tractors, and the ones on the shorter hauls buy Fords with the Big V-8 because they outperform everything else on the grades. With a Ford, they don't have to run the engine as fast to maintain legal road speeds and there is ample power for good acceleration. In fact, the men with the F-1000's say they haven't seen anything yet with a comparable gross that they couldn't pass. The lighter chassis weight of a Ford frequently means as much as 300 gallons more payload, too!"

## Again in '60 FORD TRUCKS offer Certified Savings!

### CERTIFIED ECONOMY

This year, if you buy a Ford Truck, you get a truck with certified economy in the three major expense items: gasoline, tires and initial price.



**Best Gas Mileage!** Results of second running of Economy Showdown U.S.A., show 1960 Ford 1/2-ton Pickups won every test—beat the average of the other four leading makes by 13.1%.



**Double Tire Life!** Under average conditions, Ford's truck-type front suspension gives double the front tire life of that obtained with "soft-type" independent system used on some 1960 trucks.



**Lowest Prices!\*** New 1960 Ford 1/2-tonners are priced from \$33 to \$181 below those of leading competitive makes. List prices of Ford Light and Medium Duty models are lowest in their class.

### CERTIFIED DURABILITY

The refinements built into the '60 Ford Heavy and Super Duty Trucks for longer life and greater reliability will also bring savings to your operation.



**Automatic Radiator Shutters**, standard on all Super Duty models, add considerably to engine life . . . mean less expansion and contraction, more efficient combustion and better lubrication.



**Dynamometer Tests** of Ford's submerged-type electric fuel pump showed no power loss at temperatures up to 200° F vs. 9% loss with mechanical fuel pump under the same conditions.



**Shaker Table Tests** plus constant exposure to oil, water and heat proved Ford's 1960 wiring harness to be three times longer lived than the 1959 harness.

### CERTIFIED ECONOMY REPORTS

Certified results of these and other tests conducted by America's leading automotive research organization, plus a comparison of manufacturers' suggested list prices, are now available at your Ford Dealer's. Take him up on his offer to check the records . . . see and drive the new Ford Trucks . . . and you'll save for sure!

\*Based on latest available manufacturers' suggested retail prices, including Federal excise tax, excluding dealer preparation and conditioning and destination charges



## FORD TRUCKS COST LESS

LESS TO OWN . . . LESS TO RUN . . . BUILT TO LAST LONGER, TOO!

**"Our '59 Fords have logged over 80,000 trouble-free**





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## FORD TRUCKS COST LESS

LESS TO OWN . . . LESS TO RUN . . . BUILT TO LAST LONGER, TOO!

## Demonstration program . . . Barze advises dealers to attempt a program only if they have a good, interesting home economist

contain the name, address and phone number of the individual. In addition, the person is asked to check a list of appliances to indicate those that interest him. After the demonstration, of course, these cards prove to be a real sales aid.

The dishes usually prepared and given away include: shrimp creole, steamed rice, pickled peaches, Mexican, baked ham slice, asparagus casserole, mushroom escalloped potatoes, escalloped apples, T-bone steak, cream puffs, shish kabob, Roquefort tomatoes, and rotisserie roasted chicken.

This mouth-watering menu brings up the most important factor in the demonstration—the home economist who carries the entire demonstration on her shoulders. Barze considers himself very fortunate in having Mrs. Lena Rush work for Suburban Gas (as head of the home economics department) on a part time basis. He advises dealers not to even attempt a program without “a good home economist who can keep the folks interested for one hour and 15 minutes.” Mrs. Rush has been with the company since 1957. She holds a bachelor’s degree in home economics and has six years’ expe-

rience in demonstration and home service work, including five years for a gas utility. Barze says proudly she’s “as good as any I have ever heard.”

Mrs. Rush usually works with three ranges. She only cooks on two, however. The third is cool so it can be taken apart for demonstration purposes and can hold a display. The ranges cover a wide price range, from \$249.50 to \$399.50. Even the lowest priced range is a CP model, while the other two, which are used for cooking, are “Gold Star.”

The attending housewives are treated to a double-barreled approach. Mrs. Rush gives them the usual menu hints, along with one or two recipe books and a mimeographed sheet containing all the recipes for the dishes she prepares. In addition, she reveals the latest features of the modern gas range. Usually, the people are unaware that gas can do all the things it does. Although most of the features are not new, the most frequent comment heard after the demonstration is: “Why have the gas people taken so long to bring out these modern ranges?”

Not only does Mrs. Rush sell the kitchen range, she also sells the many other uses of LPG in the home. She also touches on the agricultural uses that interest “Mr. Farmer.” And, last but not least, she sells service.

Knowing that there are always prospects in every audience, she makes sure that all the features of gas and the gas range are properly presented. Barze says the signed sales contracts the salesmen bring in during the following campaign are proof that she succeeds.

The follow-up campaign, of course, is based upon the registration cards. Everyone is asked to fill out a card, and usually all com-

ply, since they’d like to win some of the mouth-watering dishes. A master list is made from the attendance at each demonstration. Barze uses this list to send out literature on the appliances checked off by each individual. A short time later, a salesman makes a personal call. Using a little gift as a door opener, he thanks the person for attending the cooking demonstration. He then directs the conversation toward the appliances the individual checked.

The sales that result come quite cheaply. Here’s how the \$75 cost per demonstration breaks down:

Demonstrator’s salary	..\$25.00
Demonstrator’s allowance for food, trays, etc.	..... 25.00



Door prize (cutlery set)	12.50
Award to best ticket salesgirl	..... 5.00
Miscellaneous	..... 7.50

Not included in these figures are the costs of installing and bringing back the ranges. This, of course, need not result in any added expenditure, since it can be done during a service crew’s work day. Also excluded is the time it takes to plan and arrange the affair.

Fifty per cent of the cost of the demonstration is underwritten by the range manufacturer who also gives a special 15 per cent discount on the ranges used in the program.

Barze recommends that other dealers give serious thought to setting up a similar program. He is willing to discuss with them his program and its five-way success.

To Barze, the success-clincher came when a home service representative from the Alabama Gas Corp. (Birmingham) drove 60 miles to attend one of the sessions so she could see first-hand “what we were doing!” ■



“Before starting to work, study this list of polite answers to customer’s dumb questions.”

## STAFF REPORT



# ... identical?

All LP-Gas contracts are practically identical as to legal terminology but the end result obtained by the LP-Gas dealer can and does vary widely. The supplier's ability to co-operate is in a large measure dependent upon his own operations.

That's why a Richardson supply contract offers so many plus features:

We have no company owned wholesale or retail outlets to compete with you.

We have voluntarily lowered our customers' contract price to meet competition.

We have only one obligation — the success of our customers. Their success means our success.

## *Sid Richardson* GASOLINE CO.

629 FORT WORTH CLUB BUILDING • FORT WORTH, TEXAS

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OMAHA, NEBRASKA



## Some financial advantages of partnerships and corporations

**Suppose you needed money. You tried the banks (in February) other financial institutions (in March), but neither was able to help. So, now, should you seek new risk capital by bringing in more owners? There are two possible means—partnerships and corporations.**

WILLIAM W. CLARK • Editor

**P**ARTNERSHIP wears a cloak of many colors. In addition to a general partnership, there are secret partnerships, silent partnerships, and in some states (if permitted by statute) limited partnerships. Partnerships can take any form that the co-partners wish, subject to law.

It would be beyond the scope of this article to thoroughly explore all the various forms of this relationship, but a few general principles should be observed. Partnerships are based on contract so the form they take is determined by the co-partners. A good measure of control may be retained by one co-partner if desired. But unless the provisions are spelled out in the partnership contract, they will have little validity. In the absence of express agreements to operate a partnership in a certain way, the courts will construe it as a general partnership according to common law interpretation of such an organization.

Unless expressly excepted, each partner is an agent of the other in all business matters pertaining to the business. This means that each can bind the other for liabilities. And unless this exception is known to third persons with whom either is dealing, one partner's acts will still bind the other. One partner can walk out at any time, leaving the other holding the bag. Death terminates a partnership, so there must be an accounting when one or the other dies. This can be a sticky business, and an expensive one.

Even divorce and remarriage of one of the partners can have an effect on the structure of the partnership.

With all its disadvantages, a partnership does bring more capital into the business. And it makes more than one person liable for the firm's debts, which can be an attraction to prospective lenders. If your partners are men with good managerial ability or other personality and character assets, your

prospects of getting a loan will be further enhanced. The capital they invest will improve your operating and quick assets ratios, which, as we noted last month, are important to your banker.

One last word: Before taking a leap into this form of business organization, it is imperative that you retain a good lawyer to draw up a partnership agreement that will afford maximum protection to all members of the firm.

### Finding prospective partners

Where are you going to find a prospective partner? They may be all around you without your being aware of it. An investment banker, speaking before a meeting of the Texas Oil Jobbers Management Institute, told his audience that he had the names, addresses, and phone numbers of 3000 persons who were looking for good businesses in which to invest their money. Men and women in Columbus, Ga., had been asked, "Would you invest in a promising local business?" and 94 per cent answered "Yes." When asked if they knew of a small local business that would welcome their investment, 98 per cent of them said "No."

The prospects, then, are there. It's up to you to ferret them out.

The most complex form of business organization is the corpora-





## "Financing cylinder purchases with LINDE saved us money"

says John Rose, President, Propane Industrial Service, Willoughby, Ohio

"With the help of LINDE's financing plan, we were able to multiply our business several times in three years and we don't see a limit yet. Financing cylinder purchases with LINDE saved us more money than any other lease or purchase plan we ever heard of. It means we get the best cylinders at the lowest possible cost."

Mr. Rose has his largest investment in LINDE's PREST-O-LITE lift truck cylinders. Like all LINDE cylinders, they're built to last. One seam, not three, for light weight and high strength. Footring designed, constructed, and coated to prevent rust, and curled

for strength and protection. The handhole is curled, too, for a comfortable grip.

Be sure to get the facts on how LINDE's Credit Plan can help you expand your business. Write Dept. BU-04, Linde Company, Division of Union Carbide Corporation, 30 East 42nd Street, New York 17, N. Y. In Canada: Linde Company, Division of Union Carbide Canada Limited.

"Linde", "Prest-O-Lite" and "Union Carbide" are registered trade marks of Union Carbide Corporation.

*Linde*



## **"Preferred or special non-voting classes of common stock can be authorized to ensure retention of control in the original hands"**

tion. Relatively few small marketers are incorporated, and generally people tend to think of corporations as being "big." This is not necessarily true; we know of one company that incorporated with a capital investment of only \$5500! This was an exceptional case, true; but it does illustrate the fact that there are advantages to be gained in incorporating the smallest business.

Obviously, with a corporation you can get more equity capital into the company. With more equity capital you can get more and bigger loans. And most investors would rather put their money into a corporation since it gives them better fiscal protection. They don't have to worry as much

about how long you will live, for example, because the business will go on in spite of you.

As with a partnership, you will give up a measure of control in your own company. However, you can still maintain a controlling interest; effective management control can even be retained with just a fraction of total ownership. Here is what one banker\* has to say about this matter of control:

"Preferred or special non-voting classes of common stock can be authorized that ensure the retention of control in the original hands. They are just techniques, however. The real answer to the

\* Thomas W. McMahon, Jr., vice president of Chase Manhattan Bank, New York in an article in the Bulletin of Robert Morris Associates, January 1958.

control question lies in the ability of management. Stockholder support is assured if management is capable and aggressive, if sound policies are pursued, and if the stockholders are kept informed as to the why's and wherefore's behind management decisions."

### **Taxes may be higher**

When you get into a corporation-type of structure, you invite red tape and your taxes may go up. You must file annual reports with the state. You must pay special taxes. And your income taxes *may* be higher. But not necessarily, for there is a breaking point in size at which you will certainly reduce your tax bill by incorporating.

As for the \$5500 company we previously cited, this firm had to pay skyhigh taxes at the first as compared with what it would have paid had it been a proprietorship or a partnership. But it had a fine growth potential, which it quickly began to realize. Shortly it had a net worth many times that figure. It wasn't long before the tax worm turned and it found it could save money by being a corporation.

At what point, then, should a company incorporate?

Tax experts tell us that if you are married and making in excess of about \$16,000 to \$20,000, or if you are single and making \$8000 to \$10,000, you can save tax money by incorporating. Thus, even if you want to continue as a one-man operation, at these rates you would still be wise to incorporate.

How do they figure it?

First, you will have to pay franchise tax, which in most states amounts to about 1/20 of 1 per cent of your paid-in capital and surplus. Thirty-four states also levy corporate income taxes which range from 1 to 8 per cent, the average running about 4 per cent.

The biggest bite is the federal income tax, which costs 30 per cent on the first \$25,000 of corporate net income and 52 per cent of all amounts in excess of that figure. Now how would this compare with

### **Steps in Incorporating a Business outlined in new SBA leaflet**

Steps to incorporate a small concern are outlined in a new leaflet announced recently by the Small Business Administration.

The leaflet is number 111 in the agency's series of Management Aids for Small Manufacturers, and can be obtained upon request from all of the agency's offices.

"Steps in Incorporating a Business" does not discuss the advantages or disadvantages of the corporate firm. It is limited to the actual steps involved once a decision to incorporate has been made.

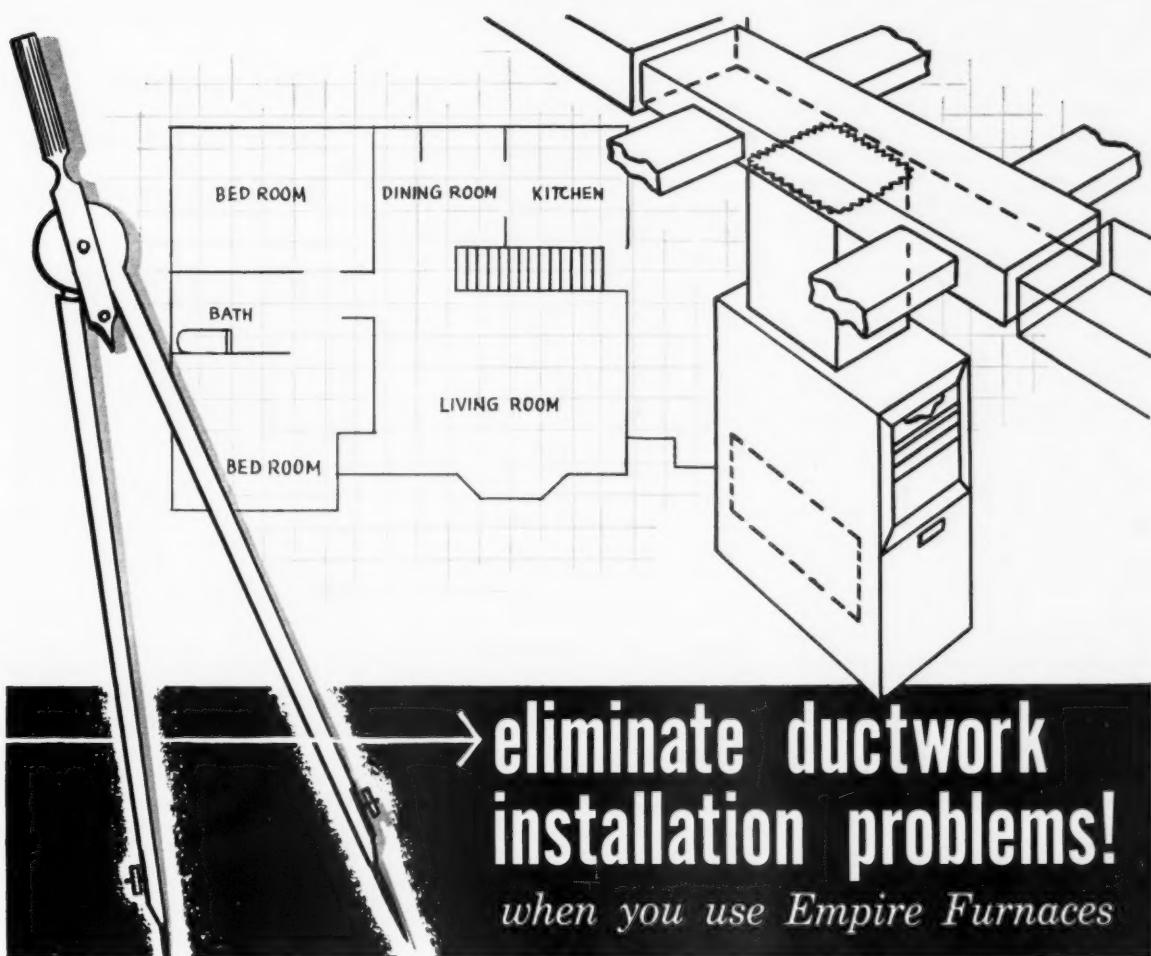
Since state laws differ on incorporation, the aid gives general pointers for incorporating businesses and discusses basic requirements. It says:

"Generally, the first step in the required procedure is preparation, by the incorporators, of a 'certificate of incorporation.' Most states require that this certificate be prepared by three or more legally qual-

ified persons in a manner prescribed by state law. Frequently, the certificate must designate the names and address of the persons who are to serve as the directors until the first meeting of the corporation."

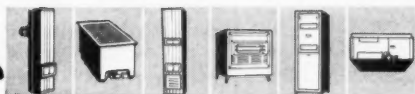
The aid points out that many states have standardized certificates of incorporation forms which may be used by small businesses. Copies of this form may be obtained from the state official who grants charters and, in some states, from local stationers as well.

The leaflet discusses information required in a certificate of incorporation, which includes the purposes for which the corporation is formed; the length of time which the corporation is being formed; the maximum amount and type of capital stock which the corporation wishes authorization to issue; capital required at the time of incorporation, and fee or organization tax charged for incorporation.



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installation problems!**  
*when you use Empire Furnaces*

Now get the complete package! Empire's free layout service tells you how to quickly and economically install an Empire central heating system...everything necessary for a complete installation...size of Empire heating unit and the necessary Empire Redi-Pak ductwork.



**Empire**

Manufacturers of the finest  
complete line of Certified  
Gas heating appliances



**MAIL THIS COUPON TODAY!**

EMPIRE STOVE COMPANY • BELLEVILLE, ILLINOIS  
**Quick!** Send more details on Empire Redi-Pak Ductwork

NAME \_\_\_\_\_

DEALER NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_

ZONE \_\_\_\_\_

STATE \_\_\_\_\_



the taxes you would have to pay as either a partnership or proprietorship?

Suppose you are single, without dependents, and have a net business profit of \$11,600 and no other income. Here is what your federal income taxes would likely run:

Business income	\$11,600	\$11,600
Less personal exemption	\$600	
Less blanket deduction	\$1,000	
		1,600
Taxable net income	10,000	
Federal income tax	2,640	2,640
Left after taxes for personal expenses and reinvestment		\$8,960

Should you incorporate, you would pay taxes twice—on your business income and your personal income. But, naturally, the salary you pay yourself would be deductible from business income before taxes. So let's assume you pay yourself \$7000 salary and your franchise tax runs \$30 a year. Your corporate taxes would be calculated about like this:

Business income	\$11,600
Less salary	\$7,000
Less franchise tax	30
	7,030
Taxable income	4,570
Less state income tax (4%)	182.80
Net corporate income	4,387.20
Less federal income tax (30%)	1,316.16
Corporate income available for expansion	\$3,071.04
Personal income	\$7,000
Less income tax	1,282
Net after taxes	\$5,718

Thus, taxes you would have to pay as a corporation would run \$30 (franchise tax) plus \$182.80 (state income tax) plus \$1316.16 (federal income tax) plus \$1282 (personal income tax) or a total of \$2810.96. To incorporate, then, would be costing you \$170.96 per year.

BUT: suppose you pay yourself the full amount of business income, less the \$30 franchise tax, or \$11,570. There would then be no state or federal corporation income taxes, so your only extra expense would be the \$30 state franchise tax. For all practical purposes, you have broken even.

Now suppose your income goes up by \$2000 per year. If unincorporated, you'd pay 38 per cent federal income tax on this amount. If incorporated, you would pay on this \$2000, \$760 if unincorporated, \$656 (in combined state and federal income taxes) if incorporated

—plus the state franchise tax of \$30.

Throwing all this information into the scales, we come up with this rule: The tax factor becomes more favorable to the small corporation at the point where the federal tax rate on personal income becomes larger than the combined federal and state corporate rates.

In states having no income tax, this point is at about \$8000 of taxable net income per unmarried owner. In states having a 4 per cent tax, it is at about \$10,000.

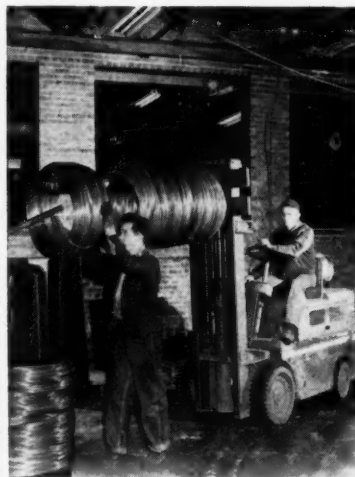
For married couples, the respective breaking points would be about \$16,000 and \$20,000.

This brief discussion necessarily simplifies the issues involved in incorporation. Furthermore, it computes tax liabilities of only a single owner. However, it points up one basic truth: even if you have no need to bring outside money into the company's capital structure, there can be tax advantages in incorporation. And—remember—in incorporation has only been suggested in this article as a means of bringing in outside money. So the point is made: don't let the fear of higher costs deter you from incorporating. You get a tax break in the higher brackets; you get to retain more earnings for expansion; you place a limitation on your own liability and you get the advantage of a continuity of existence. You have a much greater hope of passing your ownership along to your heirs.

Recently we had occasion to talk to a dealer about his loadbuilding activities. He admitted he isn't doing much expanding—just letting the new business come in as it will. In his present position, he does a good-sized volume and has income that is adequate. If he wants to expand very much, he'll have to bring in new money, perhaps take in a partner, perhaps incorporate. Things are running smoothly now: so why upset the applecart?

You can't blame him. A status quo can be a comfortable haven. But experience has shown us that in our economy you can't stand still. You either go ahead or slip back. The moment you start resting on your laurels, someone else is sure to come along and cut them out from under you. ■

## LPG forklifts save Wire Sales \$8400 annually



An annual savings of \$8400 is reported by Wire Sales Co., Chicago fabricator of steel wire, since the firm had its fleet of gasoline-powered fork trucks converted to operate on L. P. gas.

Servicing and maintenance costs on its materials handling equipment have been reduced \$300 a month since the switch. Another \$400 per month is saved in direct labor charges previously incurred during gassing of the seven-truck fleet.

L. P. gas was decided upon after Wire Sales had experimented with it—and with several makes and types of fork trucks—during a drive to lower materials handling costs. Tests indicated that LPG could produce considerable savings, so the company had the fork truck manufacturer, Clark Equipment Co., provide seven machines with factory-installed LPG systems.

At Wire Sales, 150,000 lb of unfinished wire coils are handled five times. Two Clark trucks equipped with rams do the jobs. Racks holding finished coils and palletized cartons of nails are placed in storage and later moved to shipping dock by standard Clark fork trucks.



# HAWAIIAN DOOR OPENER—

When the Pearl Harbor Navy Yard decided to adopt LPG for metal cutting, dozens of other shops in the area followed suit.

**A REPORT FROM ANOTHER SATISFIED USER OF ISLE GAS AS A SHOP FUEL**

"... use of butane has cut our gas costs from \$200 to \$30 a month... material does not get case hardened... we have less warpage."

Ed C. Watt, Manager  
HILO TRAILER, LIMITED

**SAVE TIME AND MONEY--DO BETTER WORK!**

**For Cutting Steel—USE ISLE GAS**  
Reduces SLAG formation—gives clean cuts  
Prevents case hardening—preserves tool cutting edges  
Reduces warpage  
Prevents blow-backs

**For all Heat Applications—USE ISLE GAS**  
Brazing . . . Soldering . . . Bending . . . Heat Treating  
\* except gas welding

The only cost for converting is the few dollars required for new (butane) tips for cutting torches.

**WHY NOT ASK FOR A FREE DEMONSTRATION IN YOUR SHOP?**

**ISLE-GAS**  
Division, Honolulu Gas Company, Ltd.

29 Canal Ave.  
Honolulu, Hawaii  
Phone 338-733

1508 Bishop Dr.  
Honolulu  
Phone 57-071

565 Kamehameha Ave.  
Honolulu  
Phone 53-375 or 53-574

Honolulu 31  
Lahaina, Maui  
Phone 37-703

May, 1967

Ads like this one—which appeared in "Hawaii Industry"—have opened many industrial doors for the Isle-Gas Division of Hawaii's Honolulu Gas Co. Ltd.

HOWARD W. MAGNUSON • General Sales Manager, Isle-Gas Division, Honolulu Gas Co. Ltd.

IN 1955, one of the Honolulu Gas Co. Ltd. engineers toured Pearl Harbor Navy Yard to size up the possibility of bringing gas service to the area. He found that while a considerable potential gas load existed, there wasn't much chance of amortizing both the gas main extension and the equipment necessary to convert the Yard from oil.

Instead, he proposed that the Navy could achieve great economies by converting its cutting and heating operations from acetylene to L. P. gas, supplied by the company's Isle-Gas Division. Luckily, it just happened that a vice president of the oxy-acetylene equipment firm contacted had been wanting to make a business trip to Hawaii. So, with the best advice in the business, we converted the

Navy yard's steel cutting and heating operations.

The economics predicted by the engineer have been realized, not only by the Navy, but by dozens of other shops. As an example, Hilo Trailer Ltd. demonstrates very

clearly that shops using LPG are among Isle-Gas' most satisfied customers. And, the illustrated ad has really brought in customers!

Hilo Trailer Ltd. has developed cane-hauling equipment that is  
(Continued on page 86)



The testimonial in the above ad is from Hilo Trailer Ltd., manufacturer of 80 per cent of the cane hauling and unloading equipment made in the islands. This view of a portion of the LPG-using shop area shows a typical piece of finished equipment, a 25-ton monster.

**EXCLUSIVE**  
**DPN**



A portion of the printed material used for Suburban's "Carnival of Values," which included newspaper advertisements, 3-color announcement to customers, accompanied by entry tickets, statement stuffers which were included in envelopes one month prior to start of event, and finally, statement stuffers mailed after the promotion, with apology for not being able to immediately take care of the tremendous volume of appliance business "Carnival" generated.



And did the tickets roll in! W. R. Sidenfaden, Suburban president, shuffles through a portion of the ticket landslide which exceeded 100,000 according to estimates.

**S**OARING appliance sales, topping an already-increased quota by 41 per cent, attested to the success of a mammoth "Carnival of Values" promotion staged last fall by Suburban Gas Service, Pomona, Calif.

It was the biggest promotional splash in the history of the company, which over the past couple of years has been reorganizing the appliance activities of its far-flung

## How to find 100,000 prospects

outlets into a coordinated company-wide effort.

Special sale prices on name brand appliances were coupled with a traffic-building drawing to form the nucleus of the campaign.

Here, in brief, is how it worked:

In August, a three-color sales brochure was mailed to Suburban's 70,000 customers scattered throughout 100 cities in eight western states. This announced the Carnival of Values, listing special prices on appliances, and explaining the big drawing which offered 150 prizes totaling \$4,000 in value. Two complimentary tickets for the drawing were enclosed. These could be filled out and mailed in. On the back were spaces for indicating which appliances the customer was in the market for, and which appliance in the home was the oldest.

This in itself gave the company a tremendous appliance prospect list.

In addition, Suburban advertised in key daily newspapers, and all local offices displayed both the in-store pennants and giant window banners.

Non-customers, reached through these media, were required to buy an appliance to become eligible for the drawing.

In planning the campaign, W. W. St. Clair, Suburban's sales manager, set a quota 15 per cent higher than the actual sales record for the identical period—September through November—in the previous year. Yet even that figure turned out to be too conservative.

The response was so heavy that several of the branches fell two to three weeks behind in making deliveries and installations. More than 300,000 entry tickets were distributed. According to St. Clair, 98 per cent of those non-customers who bought appliances during the campaign became gas customers of Suburban.

The Carnival was a natural culmination of the company's efforts to assimilate the new companies which it has been acquiring at a fast pace. During the past two years or so, the company has consolidated appliance lines, updated and revised its appliance catalogs, and unified the sales policies and procedures throughout the system. A year ago, it broke the first big coordinated campaign under the revised organizational setup, a house-heating promotion.

So successful was the carnival that it will be continued as an annual affair. ■

# Now **MASTER TANKS** are filled **FASTER**



**Master Tanks keep pace  
with larger pumping  
equipment now  
used on propane  
delivery  
trucks**

Now, all domestic tanks produced by Master Tank & Welding, Dallas, Texas, and Quincy, Illinois, will feature a new Multi-Valve® with a separate fill valve. This allows a much faster filling rate than any current Multi-Valve®.

This system utilizes splash filling, which creates a refrigerated condition and reduces the vapor pressure. Then tank can be filled without using a vapor return hose. Also, the direct flow on the separate fill valve cuts friction to a minimum

and reduces the strain on the truck pump. Rego engineers, in conjunction with Master engineers, have designed this new Multi-Valve® for the exclusive use of Master Tank & Welding. It cuts the time of each delivery stop and increases the number of calls each truck can make in a day. All this adds up to greater PROFITS. Another improvement has been to add a check lock to the bottom of the tank for liquid withdrawal.

LISTED WITH UNDERWRITERS LABORATORIES INC.



MASTERPIECES OF  
STEEL FABRICATION



2000 S. Front St. • Quincy, Illinois • Baldwin 3-5014  
P. O. Box 5146 • Dallas, Texas • Riverside 7-2441



TRANSPORTS



TANK TRUCKS



STORAGE



DOMESTIC



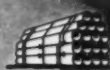
FILLING STATIONS



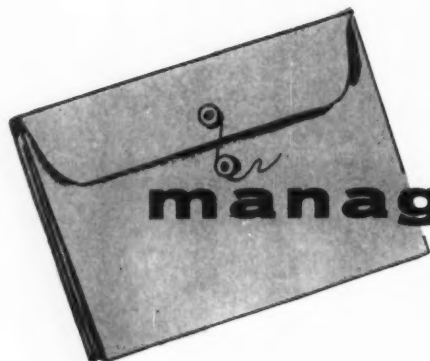
FARM CARTS



REFINERY



LINE PIPE



## management portfolio

### Discount houses? They're not these dealers' toughest problem in selling appliances

Nine out of 10 LPG dealers (according to our surveys) sell appliances as well as fuel. Why, we often wonder, don't all of them?

Moreover, to be perfectly candid, some other dealers look upon appliance selling as a chronic—if not acute—headache. If they had their druthers, they'd druther not be bothered. They carry them only out of necessity, and their sales efforts are desultory, at best.

Why? Ask them, and you'll hear a lot of reasons. Three of the most common seem to be: First, they can't compete with the discount houses. Second, they can't keep up with servicing problems. Third, appliance inventories tie up too much capital.

Are these valid reasons why appliance selling should be considered a headache? We decided to ask some of the top dealers across the United States for their opinions on the subject. Not, we hasten to add, dealers who we know don't sell appliances, or who don't do a good job of it. Just top dealers.

Interest among those who responded ran high, and their replies were too long and comprehensive to permit publishing them all in a single issue. Here's the first batch. Additional replies will appear next month.

*Harry I. Horn, Horn Inc., Anaheim, Calif., agrees that the problems exist. But to him they are challenges, and he feels each can be faced and solved. As for discount houses, he has this to say:*

#### THE DEALER SPEAKS

Whether or not discount houses are common throughout the country I don't know, but we have had them in southern California for a number of years. If we could prevail upon people to buy appliances from us on the same terms as they do from discount houses, it would be a money maker.

When you sell something FOB your store, or Delivered Only, you

have made, say 10 per cent—you know what you have made on the sale, and that is that. When it comes to the service and trade-ins, that is an entirely different matter. We have never found trade-ins to be profitable, and less now than in previous years, due to the high cost of labor. When you figure the cost to bring it in, clean it up, put it in good working order; the selling cost, hauling it to the customer's home and installing, used merchandise sales will not bring in enough money to break even with costs the way they are.

A good many dealers think they make money on used appliances, but they fail to figure all the costs involved.

This leads right into the second complaint you mention—service costs. When you figure what it costs to have a good serviceman today, as against 10 years ago, I think you have the answer to that one. In former years, when we only had to adjust orifices and the air mixture, the cost of service did not amount to much. The minute they began putting gimmicks on appliances, the service cost began increasing.

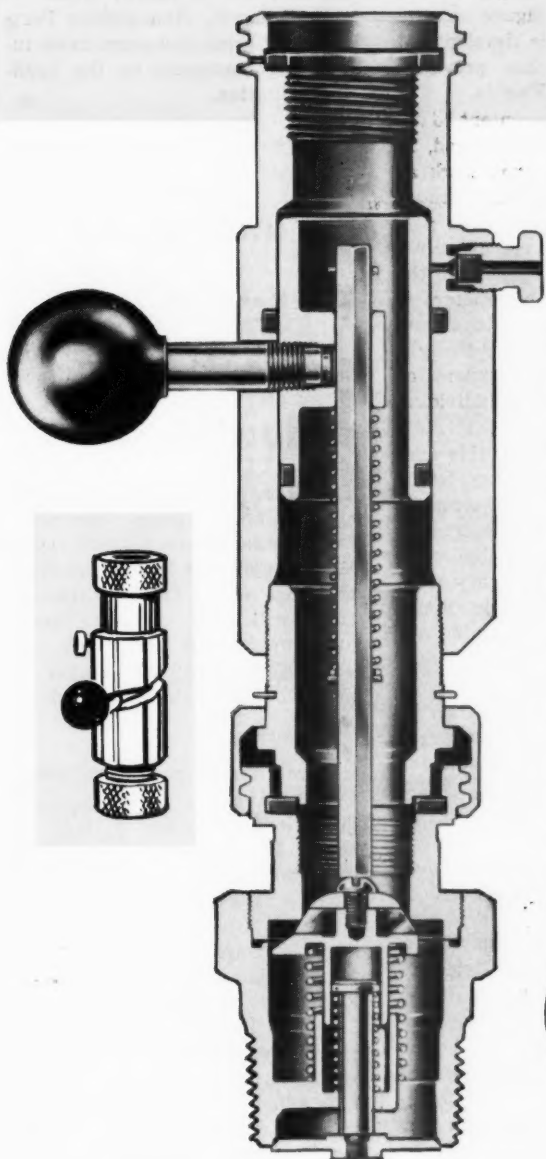
The third complaint, regarding carrying too large an inventory, cannot be considered because people want to go where they have a variety to compare with, and it is up to a dealer to carry models that move. If he is in a metropolitan area, naturally he has to have the showroom full of appliances, if he is to be considered an appliance dealer. If he has carried models which don't move, then it is up to him to be businessman enough to find some way to move them—whether by high-pressure selling, cutting prices, or anything else.

A good many natural gas dealers, as well as L. P. gas dealers, are beginning to consider the appliance "red ink" on the basis of their service costs. A large share of these service costs are due to factory defects of material or of workmanship. When this occurs, the part has to be removed and returned to the manufacturer, freight prepaid; then the dealer receives



# Unload LP-Gas Tanks Fast-Safely

## WITHOUT DAMAGE TO VALVES!



### New, Self-Adjusting Stem Fits Every Valve Instantly

Just one twist of the operating handle and your job is done. Fisher's self-adjusting internal stem slips into the valve and smoothly opens both back checks, unloading the tank safely and efficiently.

The Fisher M450 Unloading Adaptor can't damage the filler valve because the spring-positioned stem instantly adjusts to the right length for any valve. No more proding, pushing or probing with stems of various lengths - and no more distorted valves!

Fisher's new adaptor can be attached to any filler valve that has a double back check and full length dip tube. M450 is basically a straight fitting adaptor, but can be quickly converted to an angle style. In either style, a convenient bleed valve releases any residual gases trapped in the adaptor.

Made with a permanently lubricated brass body, the M450 has been listed by Underwriters' Laboratories in File MH 5410.

Write today  
for complete details  
and descriptive  
literature.



SINCE 1880

**FISHER GOVERNOR COMPANY** Marshalltown, Iowa

the replacement part back freight collect—and is expected to send his servicemen out to do the work. "Why?" I think that if our firm damaged something, or had not installed the product as it should be installed, it would be our responsibility, and there would be no question about it—certainly the customer should not have to pay for it. But when it is product fault, who should pay for it?

The automobile industry went through this same thing a few years back—today there is a very fine set-up whereby the dealer is paid for changing defective parts. This would have an extra advantage, in that the manufacturer would pick the most able person he could find to sell his merchandise and do the service work, because this service work on defective material would cost the manufacturer himself.

The public, as a whole, is very unhappy with the present gas appliance setup with discount houses and large department stores who have service agencies do their service work. They are finding that where the appliance is defective, they end up paying for the material and workmanship faults of the manufacturer, as well as getting poor service work on the part of some of the service organizations.

I have been one of those who recommended to our association that we end up with a committee to meet with gas appliance manufacturers (and natural gas dealers should be included) to work out a plan which would be equitable and fair all the way through. I think that a plan could be brought forth which would produce better results than all this continual beefing by dealers and the public alike.

*Discount houses are not the big problem in Florida, at least not in the areas served by Green's Fuel, Inc., which headquarters in Sarasota. President K. H. Koach points the finger at another nemesis—the contractor:*

I can only speak for our area but I would suggest that one of the problems with which we are confronted down here is that today we do not come in contact with the retail customer as frequently as

was the case in the past; we are dealing with contractors who are building and developing large subdivisions. The contractor, to all practical purposes, is in the appliance business in that he purchases appliances for the most part directly from the manufacturer... he equips his homes with these appliances and sells the packaged deal to the ultimate purchasers. We are called in to figure on supplying the gas. This development over recent years has prevailed quite extensively in Florida.

Manufacturers are content to obtain this type of business and, in my opinion, they do not work as closely with the legitimate retail outlets as they formerly did; possibly it is felt by the manufacturer that since a large segment of the business is through contractors it is no longer necessary to devote the time and effort once thought necessary in the development of sales programs among individual dealer accounts.

As to discount houses, this may be somewhat of a factor but we do not encounter too much competition here except to the extent of the number of electrical appliances sold by such outlets... they seem to concentrate on electric appliances rather than gas-burning appliances.

Servicing appliances is something we will always have with us and I believe proper charges should be made by the dealer for servicing the same as done by TV appliance companies, plumbing establishments, etc.

*"Appliance selling a headache? Hah!" is the reaction of D. S. Swain Jr., vice president and general manager of Swaingas, Washington, N. C. He didn't however, put it quite that way. Said Mr. Swain:*

As far as we are concerned your letter begins with a false premise because to us the selling of appliances is not a headache, and never has been.

We sell only gas appliances and our motto is "IF IT BURNS GAS WE HAVE IT." Since most LPG dealers who sell appliances sell electric as well as gas appliances, their problems would certainly be different from ours and we would not be in the position to offer solu-

tions to any problems encountered by a dealer who sold electric appliances.

\* \* \*

Such statements are reassuring, but many other leading dealers find the answers somewhat less clear cut than does Mr. Swain. But all of them who participated in this mail panel had solutions to propose, and no two were exactly alike.

Next month, Management Portfolio will bring you some more interesting comments on the appliance situation.

## **It's income tax time—don't overlook these deductible items**

The dread month has arrived; we can no longer dodge the issue. But there's always a small ray of hope: maybe one last trip through the maze of our financial transactions will turn up some previously overlooked deductibles. So, hopefully, we call on our tax expert, E. H. Mitchell, to lead the way.

If you itemize your Federal income tax deductions, here are some frequently overlooked items.

Don't let them escape you. *Casualty and theft losses.* Deductible casualty losses include the total destruction of, and partial damage to, your property resulting from a sudden, unusual or unexpected event, such as: fire, flood, storm, drought, explosion, automobile collision, or other like occurrence. Auto accidents are "casualties" except when caused by a taxpayer's intentional act or omission.

The amount deductible is the total damage minus (a) any salvage value and (b) any insurance or other compensation received or recoverable. The formula used in determining the amount of damage to business property usually dif-

**COUNSEL  
AT YOUR  
ELBOW**

**That First Look Starts The Sale On Its Way!** That *first look* your customer gives a beautifully designed WARM MORNING Gas Heater puts her (or him) in a buying mood. When you explain and show the exceptional WARM MORNING comfort and convenience features and quote the bargain-low prices, chances are your sale is made. Prove it to yourself. Put WARM MORNING Gas Heaters on your sales floor and see how they sell! Right now your WARM MORNING Distributor offers attractive early booking discounts, with anticipation or a pay-much-later Fall Dating plan. The line is complete and the advertising and promotional support for WARM MORNING dealers is the strongest ever. Why wait? Write for literature and prices today.



**Warm Morning**  
G A S H E A T E R S

LOCKE STOVE COMPANY 114 West 11th Street, Kansas City 5, Missouri

## Management Portfolio

fers slightly from that applied to non-business property.

True theft or embezzlement losses are treated the same as casualty damage. But the Government contends that "the mere disappearance of money or property from your person . . . or home (standing alone) is not a theft."

*Other miscellaneous deductions* often forgotten are:

- (1) the cost of safe deposit boxes rented for the protection of your taxable income bearing securities;
- (2) fees paid to investment and tax counsel; and
- (3) all other expenditures that are "ordinary and necessary" for the production or collection of income or for the management of property held for the production of income.

*Deductible medical expenses.* These include:

- (1) the cost of transportation (even in one's own car) to and from your doctor's office when the trip is for medical or dental treatment or diagnosis;
- (2) the cost of vitamins, tonics, etc., provided they are prescribed or recommended by your physician; and
- (3) premiums paid for accident and health insurance that reimburses you to any extent for hospital and other medical expenditures.

A fourth, rarely deducted, "medical" expense is the cost of special foods or beverages prescribed by a doctor for medical purposes. They must be in addition to (not as a total or partial substitute for) a patient's normal diet, and the physician's statement to that effect should be attached to your return. *Extension of return filing time.* Early this year internal revenue directors issued helpful instructions to individuals desiring extensions of time for filing income tax returns.

Your written request must explain the reason why you need more time and give the additional time required. You must further state:

- (1) whether you filed and made timely payments on any required Declaration of Estimated Tax for the year; and

- (2) whether each of your last three yearly returns was filed on time or within an approved extension.

Your request to the Director must be signed by you or your duly authorized representative, and may be made by letter, by other informal writings, or on Form 2688. Corporations must use Form 7004.

The Service will do everything reasonably possible to grant extensions only when there is a real

need for more time. But despite any such extension, interest at the ½ per cent per month rate must be paid on any delinquent taxes. *Taxable income too.* Taxpayers are continually reminded to report frequently overlooked income consisting of *interest credited* to accumulated life insurance dividends and to all types of savings accounts. Observing this reasonable requirement might save an audit of your return at some time in the future.

## Thirty five executives speak in Management for the Smaller Company

Where can you turn when a new type of problem arises and you have no idea of how to solve it? Chances are that someone else has already encountered the same problem—and an additional someone else has written about it. The handiest—and usually most authoritative—place to turn to is your book shelf. This section of your Management Portfolio will contain brief book reviews on "must" reading for management.

*Management for the Smaller Company*—Elizabeth Marting, Editor; 399 pages, \$9; American Management Association, Inc., 1515 Broadway, New York 36.

If your company has less than 1000 employees (and what LPG dealer has more?), this book is meant for you. Company growth—and often company survival—depend on good management. This is particularly true for the smaller company.

In this book, 35 executives tell how they successfully solved some of their companies' problems. This book is intended to show four things: (1) how a smaller company can build a strong reserve of managerial talent; (2) how it can plan and organize for future profit opportunities; (3) what it can do about specific prob-

lems in finance, marketing, and manufacturing; and (4) where and when to look for resources outside the company.

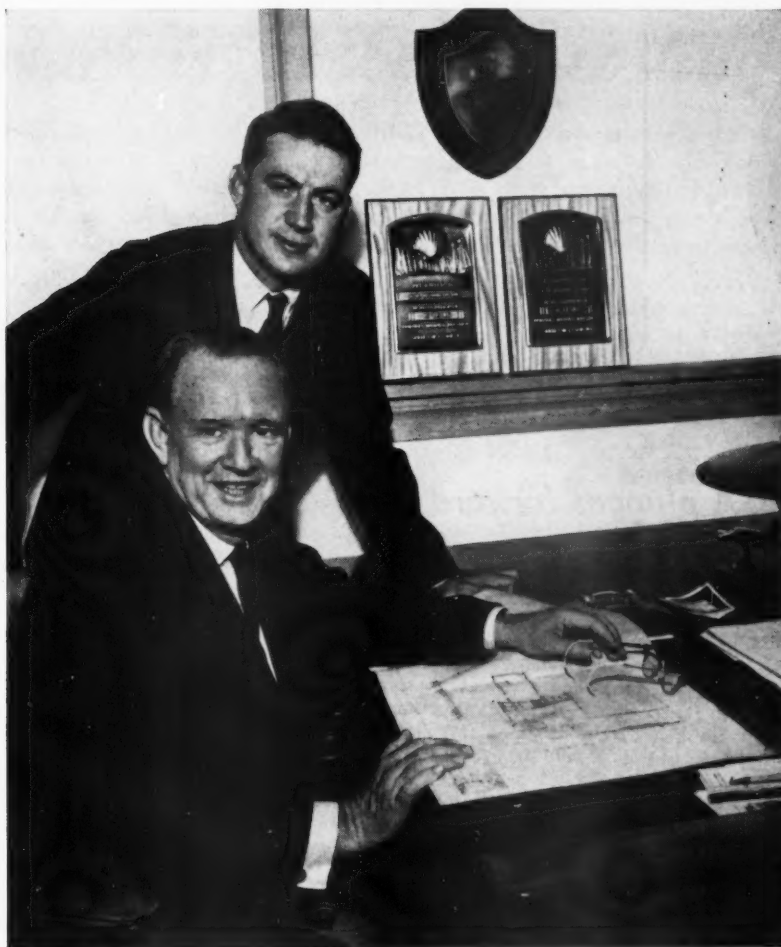
One executive, Willard M. Fox, believes every company should ask itself "a few fundamental questions":

"What right does this business have to exist? What genuine benefits can it deliver to its customers that they cannot obtain equally well elsewhere? Who are these prospects and customers? Where are they? How many are they? Why can we best serve their needs? To what extent can we serve them? What must we do to serve them most effectively? Where do we want to be ten years from today? What means do we possess and can we obtain to get there? What instrumentation will be required to insure attainment of these objectives? How can it be provided, maintained, and used effectively?"

Most LPG dealers will find that this book, while it contains material that is of little direct value to them, has a high percentage of helpful information. This is a reference book, a book to refer to when you have questions on the top man's place in the company, union organization, sales training, tax forms, government agencies, or any of the dozens of problems perennially facing the small businessman.

**BOOKS TO  
HELP YOU  
MANAGE**





## Meet A. R. Blossman, Sr. and Jr.

"Fred" Blossman, Founder-President, Blossman Hydratane Gas, Inc., Covington, La.

"Skeets" Blossman, Vice-President, pilot and executive board member

### **25 years a Shell LP-Gas Jobber—with a perfect delivery record**

Heading up one of today's largest LP-Gas operations in Dixie is a far cry from Fred Blossman's early days. His first five years were a struggle . . . included everything from policy making to truck dispatching. And it really paid off for Fred—he acquired over 1000 satisfied customers. Of course, by this time, he had become a contract customer himself—for Shell Propane. But this was only the beginning.

Reminiscing about his 25-year association with Shell, Fred says: "Shell has always maintained the wise policy of contracting to sell propane only within its capacity to supply. This policy has certainly paid off for me—a 100% delivery record from Shell—and for my customers, too. As for Shell service—you simply can't beat that either!"

Today, the Blossman organization

boasts of some 40,000 customers in two states, who are served over 20 million gallons of LP-Gas annually. He has more than 250 employees and operates a fleet of 168 vehicles (equipped with two-way radios) from 24 Blossman distribution plants. Fred, too, is justly proud that his home town of Covington chose to give him its "Outstanding Citizen Award" in 1953.



It pays to be a Shell LP-Gas Jobber

—and your nearest Shell office will be glad to tell you why. Ask for the District Manager





## association news

### *Kentucky LPGA plunges forward on 18 (count 'em) project program*

ROBERT CLAY • Managing Editor

**T**HE old truism, "If you want something done, give it to a busy person," certainly applies to the Kentucky LPGA. This group always seems to have twice as many projects going as the next association, yet its amazing list of successful accomplishments indicates that it does get things done—in a big way.

The busiest person of them all is Miss Frances L. Holliday. A human sparkplug, Miss Holliday is executive secretary of the association and editor of its monthly newspaper. A veteran in the industry, she's active in two LPG businesses, as a partner in Nead & Holliday, Tateville, and as owner of Cumberland Natural Gas Service, Burnside.

More important—from the association's standpoint—is the activity Miss Holliday puts into association work. Down through the years, her cooperation in supplying association news to BPN has been monumental. A little note will bring a two or three page letter, perhaps twice as much information as the magazine can use, but it's all on the very satisfactory "use-what-you-choose" basis. Her cooperation with the press, is, of course, only one side of her activities, but it is one to which BPN can readily attest.

Much of Miss Holliday's time is devoted to meetings, committee work, etc. And, when the state legislature is in session, she makes one or two 200-mile trips to the

state capital every week because "goodness only knows what they (the legislators) can dream up."

What the association, itself, has "dreamed up" is an extremely active program. When the new association president, B. L. Hankins of Frankfort, took office at the fall board of directors sessions, he promised "A task for every member." The board seems to have literally taken him at his word, for it approved the magnificent total of 18 projects. The scope of these projects can be most easily determined from the association's summary:

1. District Sales Training Courses given by area vocational schools for LPG dealers, salesmen, and servicemen.
2. LPG Carburetion training in area vocational schools.
3. Continued work with Agricultural Engineering Department of University of Kentucky's College of Agriculture.
4. Memberships to be continued in such state organizations as Kentucky Chamber of Commerce.
5. Trophies for two outstanding 4-H Volunteer Leaders, to be presented on Public Relations Day at the annual KLPGA convention.
6. Cooperation with civilian defense units in exhibit showing emergency uses of LPG at 1960 state fair.
7. LPG presentation at Kentucky Home Economics Association trade show.
8. Support of and membership in

Kentucky Agricultural Council.

9. To begin work and seek cooperation of other state groups "to get the freight rate on the actual weight of LPG, not on predetermined figures."

10. Search for "Miss Future Home Economist," who will be offered job experience (her school receives a major appliance plus other prizes).

11. "LPG in Modern Agriculture" essay contest for male college students, prizes being \$50 and \$25, plus visit to LPGA convention for Public Relations Day.

12. Lectures and literature for Kentucky colleges.

13. Continued support of LPG Equipment Lab in the University of Kentucky's home equipment classroom.

14. Continue work to secure "Appropriation for Basic Research on LPG at the University of Kentucky" from the 1960 state legislature.

15. Demonstration training program for personnel who follow up appliance installations, possibly utilizing students who have won KLPGA prizes or scholarships.

16. Motor Fuel Directory for Kentucky, first printing to be in the "News."

17. Adoption of a design for highway and other types of signs.

18. LPG cook book and statewide promotion of LPG appliances, to be tied into a co-operative spring sales promotion for all members.

How are all these projects progressing? Miss Holliday gave us a rundown recently, but space limitations prevent us from giving more than just the story on the first three. This much will, how-

# How much is "Obsolesitis" costing you?

Right now is a good time to take stock, to consider how obsolete equipment may have cut into your net profits during the last rush season. The true picture lies in dollars-and-cents answers to these questions: How much could you have made if your transports could carry 2,000 water gallons more per trip . . . if your deliveries could haul 1,000 water gallons more . . . if your down-time were practically nil?

Figure what you *might have made* with new type equipment, then investigate the payload capacities and quality manufacture of Mississippi Tank units. There's a model in the Mississippi Tank line that'll increase your profits!

## T-1 TRANSPORTS

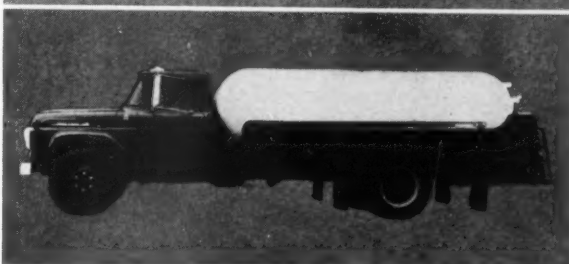
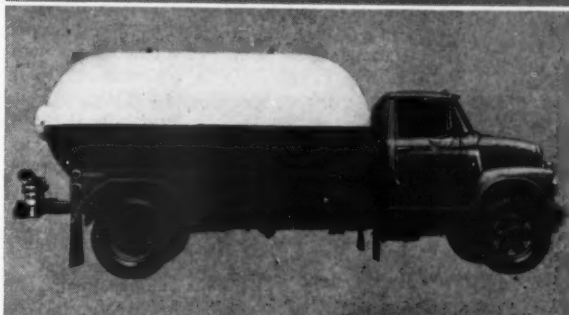
You get extra payload at *no increase in gross weight* with Mississippi Tank transports because the high tensile strength of T-1 Steel permits the use of thinner shell plates and its weldability results in better constructed, stronger units. Exclusive design assures perfect weight distribution and maximum loading. Available in 7,600 to 10,650 water gallon capacities *custom built for your area of operation.*

## SINGLE BARREL DELIVERY UNITS

Three different models, all quality built and precisely balanced for maximum payload, trouble-free service: TITAN, JR. (illustrated) has 2,600 water gallon capacity and *weighs less than 23,000 lbs. loaded*; T-1 TITAN has capacity of 3,075 water gallons on a *single 18,000-lb. axle*; ATLAS is available in capacities from 1,500 to 2,300 water gallons. All models have a wide range of options enabling you to have your units *tailored for your operation.*

## TWIN BARREL DELIVERY UNITS

Streamlined and beautiful, Mississippi Tank Twins are engineered to deliver your products at less cost. These rugged models perform equally well on back roads or in the city. Available in 1,200 to 2,300 water gallon capacities with many low-cost options for high-profit operation.



**Take the first step now toward increasing your profits next year —**

**MAIL THE COUPON TODAY!**



**MISSISSIPPI  
TANK COMPANY**  
INCORPORATED

Hattiesburg, Miss., JUniper 3-0262

MISSISSIPPI TANK COMPANY, Inc.  
Hattiesburg, Miss.

Without obligation, RUSH literature on:

☐ T-1 Transports

☐ Delivery Units

Name: .....

Company: .....

Address: .....

City and State: .....

ever, give an idea of the amount of work- and success-involved.

Describing the No. 1 project in the above list, Miss Holliday says:

"From the Division of Vocational Education of Kentucky, we have accepted an offer to adapt their extension course, 'Selling and Human Relations,' to the LPG business and to give as many such courses as our industry wishes—when we want them.

"At their invitation, I spent all day, Wednesday, January 20, at their mid-winter workshop in Lexington and spoke to the workshop (area school directors, co-ordinators, and distributive education teachers) on the LPG business in Kentucky. Then, a panel, (Gus Brumley, Farmers Fuel Gas, Cynthiana; William Wallengren, factory representative, Hardwich Stove Co.; and Mrs. Libby Geddes, home service consultant, Columbia Gas of Kentucky) outlined our industry's problems. The whole day was given to streamlining their course and adapting it to our problems.

"We're looking forward to hold-

ing such schools in April, May and June. The courses will probably be 10 night sessions of 2½ hours each. About three or four weeks after the schools begin across the state, KLPGA will promote a statewide selling campaign, asking each dealer to emphasize the item which will best aid his business. We're asking wholesalers' representatives to begin promoting this campaign at least four to six weeks before it starts."

A committee of eight is responsible for the success of this program. There are separate chairmen for domestic, industrial, and agricultural sales, plus a co-ordinating chairman. In addition, each of these four has an associate chairman.

Describing Project No. 2, listed in just seven words above, Miss Holliday says:

"We are continuing the carburetion program begun last year, training LPG servicemen and mechanics from industry in the fundamentals of LPG as a Motor Fuel through classes conducted by area vocational schools. At the Somerset school, 19 persons completed the 31-hour course. At the Ashland school, 35 persons (predominantly from industry) enrolled, giving two sections each week. With 25 enrolled, the Lafayette school also has two sections. The Bowling Green school has 18 in one section. At the Owensboro school, enrollment closed at 15, but, to meet the demand, a second course will be given as soon as the first is completed.

"As quickly as I can make trips to Hazard, Paintsville, Madisonville, and Paducah, classes will be set up in the vocational schools in these towns.

"Some of the instructors have not felt too certain about their ability to teach the LPG section, so motor fuel men from Phillips Petroleum and Ashland Oil are working with them in planning and teaching the classes. Auto & Aero Supply Co.\* and Kentucky Ignition Co. have assisted with instruction material.

"Our biggest assist on this program was made by Harold Miller, of Liquid Transporters, Anchorage, and his former partner in the Louisville L. P. Gas Carburetion Co., Merle Denny. They had closed the latter company some time ago (didn't have enough time to promote it) and had considerable carburetion equipment left. They made an outright gift of all this equip-

ment, valued at \$7800, to the state Department of Education for use in the vocational school courses. This allows us to start several schools for which we had almost given up hope of finding equipment.

"Now, the Somerset vocational school has rewritten the curriculum for auto mechanics courses to include conversion to LPG and maintenance of LPG-using motor vehicles. This material will be presented to daytime students, as well as to vocational students. It is believed that as each school completes its first LPG course, it will follow Somerset's lead.

Describing progress on Project No. 3, Miss Holliday says:

"Since his appointment as Chairman of the Agricultural Promotional Committee, Gus Brumley has given much attention to the University of Kentucky Agricultural Engineering Department. He holds an engineering degree, has ten years experience in designing combustion burners, and now owns and operates Farmers Fuel Gas, Cynthiana. Just now, he is working with Dr. B. F. Parker and Prof. Ed. Smith in designing a small experimental cabinet to be used in grain-drying experiments.

"We are asking Phillips Petroleum to send its Indianapolis motor fuel man, Bill Jacka, to convert three pieces of Agricultural Department equipment: a welding machine, a tractor-mounted flame cultivator, and a mechanical tobacco harvester.

"We agreed to provide the heating equipment and the gas, if the state would specify LPG for a College of Agriculture project involving plastics greenhouses. (We watched it happen before: the materials used in the experiment are the ones recommended.) The goal of this project is to make future recommendations that coal miners in the depressed areas of Eastern Kentucky supplement their incomes with income from plants and vegetables grown in plastic greenhouses. Our offer was accepted. Arkla salesman R. H. Kinney has worked with Agriculture College personnel and a Humphrey unit heater was furnished for the project. Phillips Petroleum is furnishing the LPG, through our president's firm, Hankins Appliance. Mr. Hankins will set a tank, consigned for the two-year period of the project by National Butane Tank Co., Memphis. Mr. Hankins will lend a licensed serviceman to

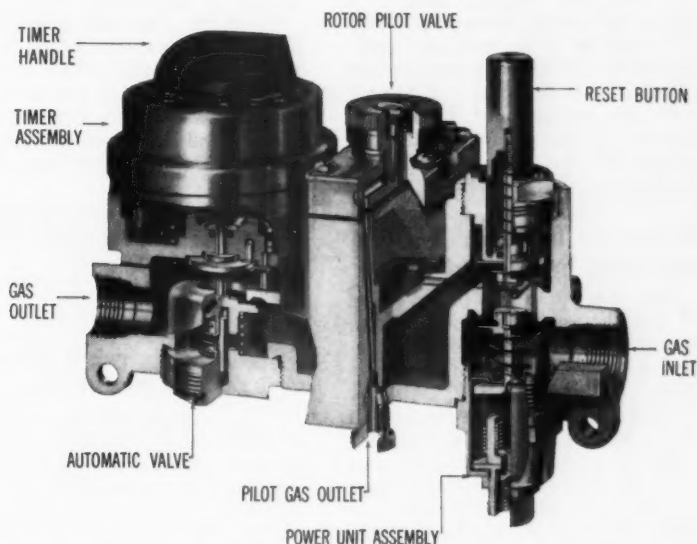


Another annual project net included in the list of 18 is Kentucky LPGA's annual search for "Miss Kentucky L. P. Gas," (not to be confused with "Miss Future Home Economist.") Miss Kentucky L. P. Gas of 1960 is Joyce Mae Miller, daughter of the Preston S. Millers, Miller's L. P. Gas, Bowling Green. She'll reign during the association's 13th annual convention in Louisville, Aug. 14-16. A college sophomore, Miss Miller works part-time in the family LPG business and has been a member of the Kentucky L. P. Gas Chorus (these Kentuckians don't miss a bet!) for several years.



# BASOTROL<sup>®</sup> INCINERATOR CONTROLS

*...designed for  
minimum  
and maximum  
timed  
burning cycles*



Basotrol valves for gas incinerators are designed to give minimum and maximum timed burning cycles, assuring complete combustion of waste material. At the same time these Basotrol valves provide a complete automatic shut-off of main burner and pilot burner gas, if and when the pilot burner should be extinguished.

The main burner timer clocks are available with the following timing cycles: a maximum burning cycle of 4 hours with either 1, 1½, or 2 hours minimum operating time. Other timers, whose minimum time-on may go as low as 30 minutes, are available on special order. Timers come with blue or green dials, and with aluminum figures as specified.

All of the Basotrol valves are equipped with the Baso *automatic pilot* for complete shut-off of main burner and pilot burner gas . . . *rotor pilot valve* with built-in adjustment for *on-off* pilot burner operation . . . *semi-automatic main burner valve* with a maximum 4-hour main burner operation cycle . . . *pilot gas filter* for less pilot outage. All operating units are replaceable for quick and easy servicing.

Install a Basotrol valve in your new gas incinerator. Pipe size: ¾" N.P.T. Capacity: Natural Gas at 1" W.C., 82,880 Btu/hr.

For more information about Basotrol valves, write Baso Inc., Dept. SB-1, Milwaukee 1, Wisconsin.



**BASO** **B**  
INC.

Milwaukee 1, Wisconsin

work with Agriculture College personnel in making the installation."

Every story should have an ending. But how can you wind up a tale of perpetual promotion? With all there is to be reported about Kentucky LPGA, one can't write "Finis." One can only yell "Cut!" with the thought of once more taking up the group's prodigious project-list in the not-too-distant future!

#### **Retirement insurance program sponsored by Missouri group**

At a recent meeting of the board of directors of the Missouri LPGA, it was unanimously voted to sponsor a retirement insurance program.

Association sponsorship will make available to most member companies benefits they would not be able to obtain without such sponsorship, and in most cases at a lower cost than would be available without such sponsorship.

The plan will be flexible enough to permit a tailor-made program for each participating company. This feature was thought to be more desirable than an inflexible formula which would have to be applied in each case because of the difference in conditions that exist from one company to the next.

#### **Nine men appointed to Pennsylvania advisory board**

The following men were recently appointed to the Pennsylvania L. P. Gas Industry Advisory Board: Mark O. Haines Jr., chairman; Paul Haines, Raymond E. Thayer, W. F. Keehn, Leonard Lemon, W. D. Cook, H. Emerson Thomas, Russell Trexler, and Moylan E. Brown, secretary. The appointments were made by William Batt, secretary of Labor & Industry, Commonwealth of Pennsylvania.

The purpose of the board is to assist the Pennsylvania Department of Labor & Industry in the proper enforcement of the L. P. gas law recently amended by the Legislature and signed into law by the governor. Also, the board will serve as a liaison between the industry and the department.

#### **Veterans, beginners given service school course**

March 21-23 saw three days of concentrated study in the latest technical service and commercial developments in servicing L. P.

gas equipment. Scene of the 13th annual L. P. gas service school was the University of Minnesota, Institute of Agriculture in St. Paul.

Given in cooperation with the L. P. gas industry, LPGA, the Minnesota Petroleum Gas Association, and others, the course of instruction was on two levels, for beginners and for those with experience in servicing L. P. gas equipment.

The school combined comprehensive instruction by leading industry and university men with actual demonstrations and question-and-answer periods.

#### **Council names public relations chairman, eastern regional man**

C. F. Craigie, Alexandria, Va., has been appointed eastern regional manager for the National LP-Gas Council, and Philip S. Harper Jr., president of Harper-Wyman Co., Chicago, has been named chairman of the public relations committee.

Craigie succeeds John Hartzell who represented the Council in the East for the past two and a half years. Hartzell has been transferred to the Council's Evanston, Ill., headquarters.

Craigie brings a background of 20 years in public relations, publicity, advertising and sales promotion to his new position with the Council.

Harper succeeds John G. Guardiola, former advertising manager of the Protane Corp., Cleveland, Ohio. Guardiola retired from the chairmanship when he established his own L. P. gas business.

#### **Missouri and Illinois to repeat two-state exposition**

Because of the success of their combined efforts at the 1959 convention and trade show, the Missouri and Illinois L. P. Gas Associations will again join forces June 13-15 at the Chase Hotel in St. Louis, Mo.

The exposition will open Monday, June 13, with a golf tournament. Registration will begin at noon and the convention will then get underway with a program of meetings, speakers, social functions, and a two-day trade show on Tuesday and Wednesday, June 14 and 15.

George R. Strode, St. Louis, representing MLPGA, and Gene C. Felt, Centralia, Ill., representing ILPGA, have been appointed co-chairmen of the convention committee.

#### **B-P Institute of Louisiana announces convention plans**

The annual convention of the Butane-Propane Institute of Louisiana will be held June 12-13 at the Monteleone Hotel in New Orleans, it was announced by W. A. Keller, president.

Theme of the business sessions will be the role of butane and propane in the expanding South, especially Louisiana.

Tentative plans are for registration on the first day, with all business meetings reserved for the second day. Highlight of the convention will be the banquet scheduled for the second night.

#### **ASSOCIATION NOTES**

The Minnesota LPGA is again participating in the Mrs. Minnesota Contest, which is the state prelude to the annual Mrs. America Contest held in Florida in June. In order to publicize the association's interest in the program, an ad was run in the pictorial section of the February 14 issue of the *Minneapolis Sunday Tribune*. D. A. Larson is the chairman of the promotion committee working on the contest.

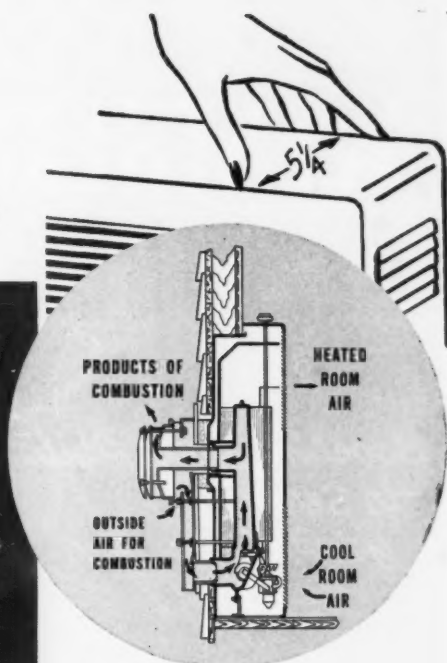
A series of safety clinics, sponsored by the Alabama LPGA, will open in Mobile on May 9 and close in Gadsden on May 20. Other dates and places are: May 10, Evergreen; May 12, Fort Rucker; May 13, La Fayette; May 16, Selma; May 17, Tuscaloosa; and May 19, Decatur. Each session's program will include talks by safety experts, movies, and a live fire demonstration.

Plans are underway for the Kansas LPGA annual L. P. gas carburetion conference, which will be held on the campus of the Kansas State University, Manhattan, on May 16-18. Eleven different topics will be presented in addition to working, in small groups, on six major makes of carburetors, plus information on tractor conversion procedure and L. P. gas trouble shooting.

At its 15th annual convention, April 10-11 in Wichita, the Kansas LPGA will present its Hall of Flame. It will be a display of the old and the new—a visual report on progress. A supplier supported function, it is not a trade show, but designed to give those in attendance an opportunity to marvel at the strides made by the industry.

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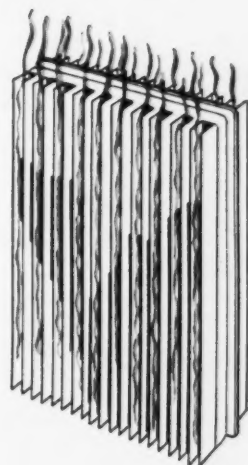
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## THE *ALL-GAS* HEATER WITH *ALL* THE FEATURES FOR BETTER, SAFER HEATING

The Saf-Aire Automatic Gas Heater is in a class by itself—no other heater offers so many sales-making features! No chimney, no ducts, no electricity needed...even if power fails, Saf-Aire continues to operate.

1. Tested and proved in 12 years of operation—250,000 in use today.
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3. Approved for bedroom installation—the most critical test of safe operation.
4. Three kinds of control—manual, wall thermostat, Unitrol.
5. Modern built-in heater—recessed between the studs (not hung on the wall). Handsomely finished in two-tone enamel.
6. Heat exchanger is ceramic coated inside and outside for protection against corrosive effects of condensation.
7. Easily installed through a square hole.
8. Easy to service—loosening two screws permits removal of entire burner assembly.
9. Quiet—fins on heat exchanger prevent expansion noises.
10. Nationally advertised in shelter group magazines.
11. Complete assortment of consumer literature, window and floor displays, local advertising material.



### THE ONLY GAS HEATER WITH A FINNED HEAT EXCHANGER

Saf-Aire heating surface is greatly increased by close-set fins, running full length of exchanger. Saf-Aire's vertical heat exchanger moves more air across hot surfaces—heats faster—heats better.

Symbol of  
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Excellence

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# WEATHERHEAD CYLINDERABILITY

*Boosting your Ability  
to Serve  
your Customers  
BETTER!*

Exclusive  
new 100 lb.  
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WARRANTY  
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**NEWS**

## High performance burner study available this month

Scheduled for publication this month is the American Gas Association Laboratories' Research Bulletin 80, "Gas Company Experiences with the Experimental High Performance Burner."

The bulletin outlines studies and tests performed by utilization, servicing, and home service departments of eight utility companies on an experimental burner design adapted to conventional ranges.

In 1954, an experimental domestic range top burner was developed and introduced by the Laboratories to the industry as a single duty burner incorporating increased performance ability, greater flexibility, and greatly reduced in size and mass as compared to most contemporary single-duty burners then available. Because of its small physical size, including a  $\frac{7}{8}$  in. diameter burner head, this burner soon became widely known as the "nickel" burner. While the design of this original experimental "nickel" burner was applied by interested manufacturers to ranges for field testing, the association's Technical Advisory Group for Domestic Gas Cooking Research requested further development work be undertaken to improve heating speed with small diameter utensils and to increase the maximum burner input rate when used with straight LPG.

As a result of further studies on the "nickel" burner, a modified burner design was developed containing a larger burner head and larger ports which were angled upward from the horizontal to produce a smaller flame pattern on the utensil bottom at full burner input rates. This modified burner has been designated as the "High Performance Burner."

To gain field experience with the high performance burner, a number of utilities volunteered to test and evaluate this burner in their utilization, servicing, and home



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YOUR WAY!**



**The Biggest PROFIT opportunity in dryer history!**

**IT MAKES THE "FACTORY-TO-YOU" APPEAL  
WORK FOR YOUR STORE**

Smart merchandisers are finding this the most successful low-cost promotion they've run in years. Plenty of excitement! Plenty of traffic! A real stimulator for salespersons and customers.

The whole promotion story is in the Hamilton Dryerama Kit—yours simply by returning the coupon. Get in on this tested and proved Hamilton sales builder. Get on the Hamilton Dryerama bandwagon!

**SIGN UP TODAY!**

**USE THIS COUPON!**

**PROFITS  
BY THE TRUCKLOAD**

- Minimum Investment
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HAMILTON MFG. CO., Sales Promotion Dept.  
Two Rivers, Wis.

**RUSH ORDER:** Send complete details (including Dryerama Promotion Kit) on how I can organize a Hamilton DRYERAMA GOLDEN PROFIT promotion for my store.

Buyer's Name.....

Store.....

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service departments. A number of range manufacturers offered to supply free standing ranges and four burner top section burner boxes which were modified by the Laboratories to include two high performance burner installations, complete with ignition systems, in one-half of each unit. Thus, with two of the experimental burners adapted to a range top section, the high performance burners could be compared with conventional burners.

In most instances, the high performance burner was reported to have exceptionally good performance as a single-duty burner for low temperature operations as well as medium and high temperature operation.

Copies of the bulletin may be obtained from the Association or the Laboratories, 1032 E. 62nd St., Cleveland 3, Ohio, at \$2 each.

### **"Advance the Gas Flame," Lee Brand cries**

Using as his battle cry, "Advance the Gas Flame," Lee Brand of Empire Stove Co. is trying to rally gas men into a united front against electrical competition.

The fight, which has been a personal crusade with Brand in the past few years, would be organized into a seven-point selling program, according to his plans.

"The electric industry is now using the same type of vigorous selling efforts that the gas industry itself used to displace oil and coal," Brand declares. "The same thing

will happen to us if we are complacent."

As an illustration of the electrical industry's activity, Brand cites the "Live Better Electrically" program, which is now operating on an advertising budget of \$3 million, as well as the Medallion home and electric heat programs, which are being pushed at the local level by electric utilities.

The seven-point program which Brand recommends as a counter-measure calls for individual action at the "grass roots." The points are:

1. Manage a profitable business. ("Lack of basic knowledge of shop and on-the-job costs leads to price selling, the shortest route to economic suicide," says Brand.)
2. Devote definite time to selling. ("Sell regularly and sell hard.")
3. Sell service and provide service.
4. Find more prospects. ("At some time every customer has been a prospect. If your customer list does not grow, your business will fail.")
5. Tell the gas story everywhere.
6. Form informal groups for co-operation.
7. Keep your promise . . . keep every customer satisfied.

As a means of stimulating support for the program, Brand is distributing "pledge cards" on which are printed the seven points. He hopes dealers will pass them out in chain-letter fashion—each dealer who receives one to give out two, for example—in order to speed the development of the campaign.

Concurrently, Brand offered to

act as a clearing house for gas-vs.-electric-heat case histories which would be "real, live ammunition that will put a punch in our program."

### **Michigan L. P. gas regulations revised and updated at hearing**

Michigan regulations governing the handling and storage of propane, butane and other L. P. gases were revised and updated at a public hearing called recently by State Fire Marshal Glenn M. Walker.

The changes were adopted by representatives of the industry at a conference with state and local fire officials at Michigan State University.

State Police Commissioner Joseph A. Childs said the proposed changes will allow further expansion and use of L. P. gases. Walker said the new code would become a part of the future state administrative code effective 90 days after the hearing. Walker said the last revision of regulations covering liquefied petroleum gases was made in 1952.

### **Suburban Propane '59 sales hit record high**

An increase in sales of \$3,278,000 over 1958 was reported by Suburban Propane Gas Corp., Whippany, N. J., for the year ending Dec. 13, 1959. This figure, according to Mark Anton, president, includes approximately \$1 million increase in sales by the company's unconsolidated manufacturing subsidiaries.

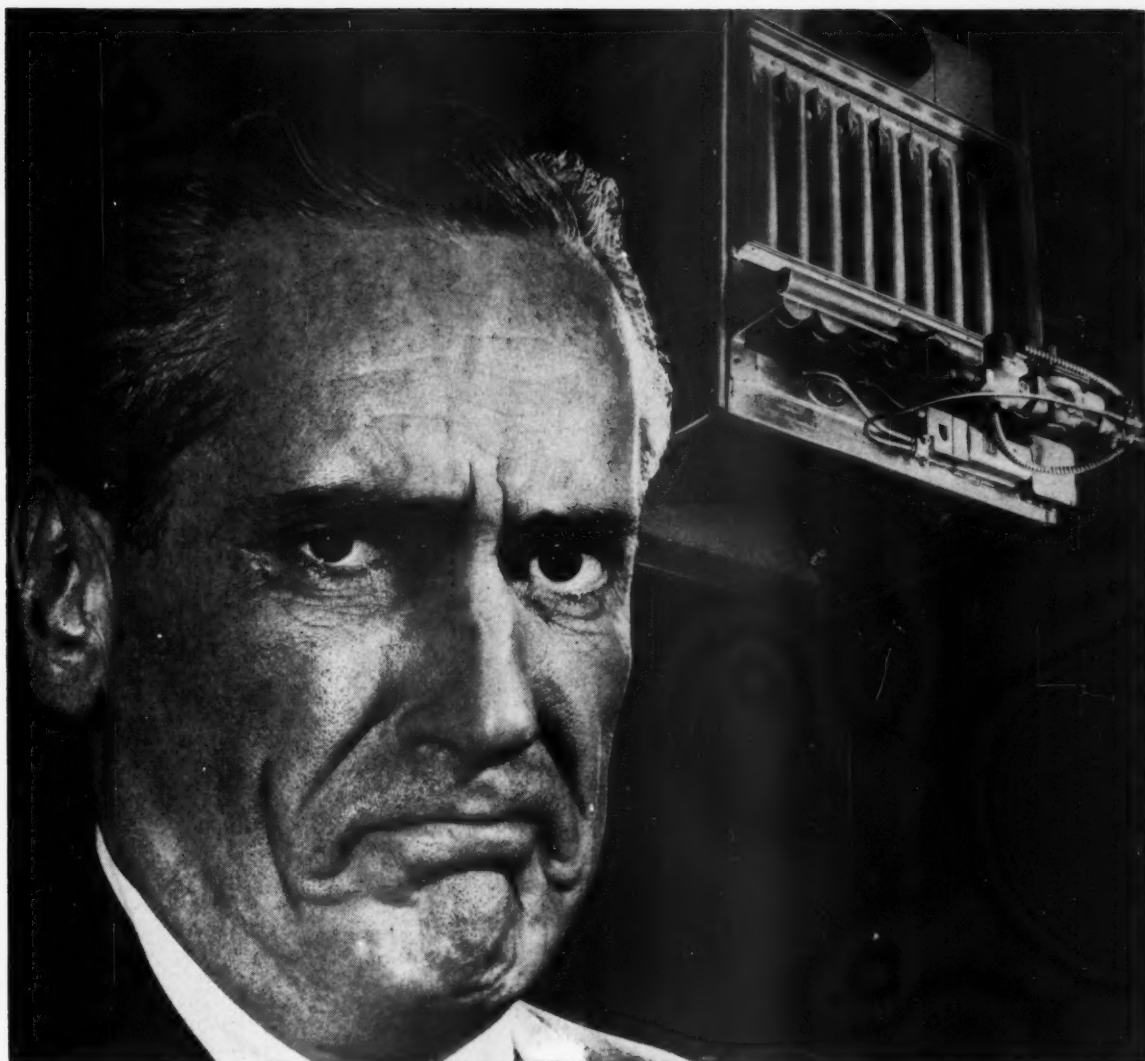
Preliminary figures released recently indicate gross revenue of \$43,800,867, as compared with \$41,597,157 in 1958. Due to continued rising costs, however, net earnings dipped to \$2,128,591, slightly less than the 1958 net earnings of \$2,296,407.

Earnings per share of common stock were \$1.41 as compared with \$1.54 for a lesser number of shares of stock outstanding in 1958. Anton said that the ever-increasing cost of doing business created by inflation cannot be overlooked as one of the more important factors leading to this decline in earnings. The increase in wages and benefits alone amounted to more than \$900,000. This one item of expense represents 25.5 per cent of the total revenue as compared with 24.6 per cent in 1958.

He said that other factors which



Emblem of the "Advance the Gas Flame Everywhere" program, through which Lee Brand hopes to stimulate the gas industry to more forceful action in battling the threat of electrical competition.



## TOUGH BUYERS

### DEMAND REZNOR STAINLESS STEEL DUCT FURNACES

BECAUSE THE HEAT EXCHANGER AND BURNERS CANNOT CORRODE!

The plumbing, heating or air conditioning contractor has to be a tough buyer. He has to look ahead and consider possible trouble makers like corrosion in air conditioning, make-up or ventilation air systems. That's why so many contractors demand Reznor stainless steel duct furnaces: they *can't* corrode!

**LOWER FUEL COSTS, TOO** —The tough buyer wants to make sure his customers get even heat and lower fuel costs. That's why he appreciates Reznor "extras," like the gas modulating

valve. As discharge temperatures rise, the valve cuts gas input to 20% of rated capacity, then shuts off the supply completely.

**CHECK THE "TOUGH BUYERS' LINE"**  
You can order and install Reznor duct furnaces in capacities up to 300,000 Btu. Use them in multiples for greater heat requirements. Buy matching Reznor blowers.

For the full story, phone your local Reznor distributor, or write to Reznor Manufacturing Company, Dept. 4 B, Mercer, Pennsylvania.

THE HEATING WORLD IS FULL OF TOUGH BUYERS; THAT'S WHY REZNOR IS THE WORLD'S LARGEST SELLING DIRECT-FIRED HEATER!

# REZNOR HEATERS

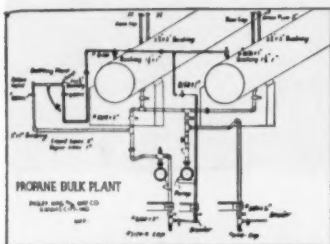
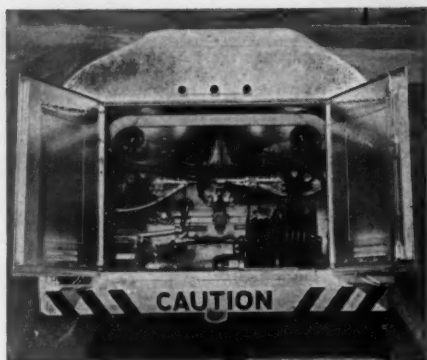
"THE TOUGH BUYERS' LINE"

**Your One Supplier with everything in L. P. gas  
and Anhydrous Ammonia Equipment**



**"The Loadmaster" LPG Truck Tank**

**PASLEY-DESIGNED** Truck Tanks (see above and right) were first to feature all controls from one location. All operation is from one point—rear compartment.



**BULK PLANTS** Pasley LPG and Ammonia type installations—a turnkey job or engineering for your own installation. Write, wire or call.

*Also a complete line of accessory equipment.*

**"Pastels By Pasley"**

**COLOR—The Modern Trend!** Bring your LPG Equipment up to date. Available in the following colors . . . (write for information)

Blush Peach	Smoky Grey
Sunshine Yellow	Seafoam Blue
Mustard Lime	Wedgewood Green
Eureka Orchid	Rose Beige
Lake Blue	Desert Rose



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affected earnings in 1959, but are not likely to recur, were above-average temperatures and the introduction of natural gas into certain areas.

Anton stated further that the company had suffered a winter load cutback when the poultry industry, hit by lowering prices, began to migrate south. Poultry brooders had been a good load in the colder northern climates, but in the warmer southern states, little artificial heat is required.

**LPG-powered tractor designed for trend to larger units**

The new 1960 Model M-5 tractor by Minneapolis-Moline, first in a series of tractors in the 60 to 70 hp class, are designed for today's trend to larger work units, according to M. E. Carroll, vice president-marketing.

With full five-plow power, the 336 cu in. Moline-built 4-cylinder engine, at normal governed speed of 1500 rpm, develops an estimated 78 brake horsepower, 65 belt hp and 59 drawbar hp on gasoline and L. P. gas models.

Engine, transmission and axle are designed and built by Moline to form a heavy-duty coordinated unit.

Independent rear power take-off is standard on the M-5.

Three interchangeable row-crop front ends, single wheel, dual wheel, extendable, as well as standard front end, are provided.

It is equipped with a 12-volt electrical system.

**General Gas' industrial sales are 23 per cent over 1958**

General Gas Corp., Baton Rouge, La., reports record high sales of more than 100 million gal. of L. P. gas during 1959, an increase of more than 9 per cent over 1958.

Hal S. Phillips, president of the firm, said sales last year totaled 101,133,000 gal. compared to 92,660,000 gal. during 1958.

"Major improvement," Phillips said, "was achieved in the company's industrial category, with sales to this market increasing more than 23 per cent to 37,378,000 gal."

Despite unseasonably warm weather experienced in the company's southern marketing area, particularly during February 1959, Phillips stated that domestic gas sales declined by only 3 per cent from the previous year.



TO THE  
BUSINESSMAN  
CONTEMPLATING  
2-WAY RADIO  
FOR 1960

Whether your business is large or small, buying and installing 2-way radio today can be your most profitable decision. Here are important factors you'll want to consider:

**1. HAVE YOUR SYSTEM ENGINEERED BY AN EXPERT.**

Your system should be planned to *your specific* requirements—taking into consideration many factors such as where and how far your vehicles travel—integration with your business procedures, etc. This is *not* a job that can be done as a sideline. It requires the specialized knowledge of highly trained experts.

When you choose Motorola 2-way radio, you can expect experienced counseling and custom-planning of your radio system. The *complete* responsibility rests with one source. *Motorola, and only Motorola, sells exclusively from factory to you through full time, factory employed 2-way radio sales engineers . . . specialists who are backed up by the industry's largest and most experienced systems engineering department.*

**2. MAKE SURE THE EQUIPMENT YOU GET MATCHES YOUR JOB.** Each component of your system should be chosen because it is the most efficient for the specific job it has to do. Only a complete line can assure you of the model that exactly meets your needs.

When you choose Motorola, the components of your system will be carefully selected from the most complete line of communications equipment available . . . equipment that has been proved on the job in thousands of installations for every conceivable type of vehicle.

**3. GET THE MOST RELIABLE EQUIPMENT FOR LONG-RUN ECONOMY.** Your equipment has to be built to take a beating—to stand up day in and day out under hard usage. Naturally, you can't tell by looking at the cabinet how long a radio will last. It's better to look at the record. Here's what you will find: police and fire departments, utilities and transportation services—the nation's most critical and most experienced buyers of 2-way radio—specify Motorola *more often than all other makes combined*. Why? It works better . . . longer . . . and at lower cost. Ask a nearby Motorola user.

**4. DEMAND NEARBY, EXPERT SERVICE.** Long outages can be more than inconvenience; they can be costly. But when you choose Motorola, wherever you are, one of Motorola's 800 Service Centers can give you fast, efficient service. A Maintenance Contract, with Motorola fully responsible, assures you of continuing peak performance. And Motorola has its own line of service test equipment and staffs its Service Centers with factory-trained and factory-supervised technicians.

**5. WRITE MOTOROLA, FOR MOTOROLA IS SPECIFIED MORE OFTEN THAN ALL OTHER MAKES COMBINED.**

Motorola . . . the communications specialist  
to industry for nearly three decades



**MOTOROLA**

**2-WAY RADIO**

Motorola Communications & Electronics, Inc., 4501 Augusta Blvd., Chicago 51, Ill.  
A Subsidiary of Motorola Inc. SPaulding 2-6500

### Arkla announces three April training schools

Three training schools will be conducted in April by Arkla Air Conditioning Corp. On April 4-8 and April 25-29, Sun Valley equipment service training schools will be held at the factory in Evansville, Ind. A product and sales school will be held April 11-14 at Little Rock, Ark., Arkla sales headquarters.

Three Sun Valley equipment service training schools have already been conducted. After April, six

more are scheduled: May 16-20; Sept. 26-30; Oct. 10-14; Oct. 31-Nov. 4; Nov. 14-18; and Dec. 12-16.

One water chiller service school was held in March. The others are scheduled for May 2-6; Oct. 17-21; and Dec. 5-9.

Additional Sun Valley product and sales schools are scheduled at Little Rock for May 23-27, and Dec. 12-16. Two similar sessions on water chillers will be conducted May 9-11 and Nov. 7-9.

Russ Brown, Arkla's manager of heating and air conditioning prod-

ucts, said applications for the service schools should be made to The Service Training Department, Arkla Air Conditioning Corp., Evansville 7, Ind., and be received at least 10 working days before the start of each session. Classes in May, October and December are scheduled so that a student may attend both Sun Valley and chiller service schools by remaining in Evansville over a weekend.

### Major decentralization announced by Crane Co.

Crane Co. President Wesley A. Songer recently announced that the company has been formed into five groups, each with its own manufacturing, engineering, sales and control divisions.

They are: industrial products group, Chicago; plumbing-heating-air conditioning group, Johnstown, Pa.; Crane Supply Co., Chicago; systems and controls group, headquarters to be named; and international group, New York City, an entirely new function.

The new arrangement unites Crane with the five firms that it has purchased since last September, Songer said. The firms are: Chapman Valve Manufacturing Co., Springfield, Mass.; Pipe Fabricators Inc., East Chicago, Ind.; The Swartwout Co., Cleveland, and National-U. S. Radiator Corp., Johnstown, Pa. A fifth acquisition, Canadian-Pittsburgh Piping Ltd., has become part of Crane Ltd., Canada, a wholly-owned subsidiary of Crane Co.

### Hydronic sales gain seen for 1960; marketing leaders named

An increase in sales and continued expansion of its markets during 1960 were forecast recently for the hydronic heating industry.

R. S. Doherty, president of the national Better Heating-Cooling Council, the industry's marketing-promotion arm, predicted "at least" a 10 per cent gain for the industry's residential equipment this year over last, providing residential construction remains relatively stable.

At the same time, he said the industry's share of the total home heating market probably would rise above last year's level.

New Plans Board chairmen for both the Residential and Commercial & Industrial Divisions of the Council were announced last month. Robert W. Williams, general

## Your ACE IN THE HOLE



● You're really playing it smart when you choose Corken pumps because you'll always have an "Ace in the Hole" . . . the **CORKEN EXCHANGE PLAN!**

When you need an Exchange—just contact your nearest Corken distributor. Within a few hours he'll ship one to you from his own stock (or from the factory) and you send your old pump to the factory for credit when the Exchange arrives. The cost?—about half the price of a new pump!

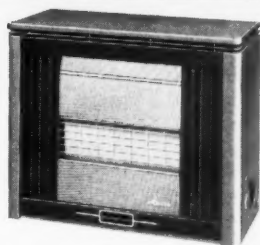


**CORKEN'S, INC.**

P. O. BOX 1062 • PH. CE 5-5517  
OKLAHOMA CITY, OKLA. U.S.A.

# *Martin* High Fidelity Heat

is 1960's Most Effective Gas Heater Salesmaker  
**ARE YOU TAKING ADVANTAGE OF IT?**



**MARTIN V870 VENTED  
 RADIANT CIRCULATOR**

This is just one example of the beauty of Martin Continental Console Cabinet design. There are four sizes in this series, all available with Martin High-Fidelity Heat, all finished in Lifetime Porcelain, all equipped with Lifetime Guaranteed cast iron burners.

If not, better find out how much Martin High-Fidelity Heat can mean to your customers in added comfort and increased economy . . . and to you in added sales . . .

For the full story on Martin High-Fidelity Heat, Martin Continental Console Cabinet design, and the most complete and saleable line of gas heaters in America, write for catalogue today.

See the Martin Line at  
 Southeastern LP Gas Show, Atlanta, booths F7 and F8  
 LP Gas Association Show, Chicago, booths 207 and 208



**STAMPING & STOVE COMPANY**  
 HUNTSVILLE, ALABAMA



AMERICA'S MOST COMPLETE HEATING LINE

marketing manager of American Standard, New York, will chairman the Residential Division; and Henry M. Gibb, sales manager, Pacific Steel Boiler Division of National-U. S. Radiator Corp., Johnstown, Pa., is the Commercial & Industrial Division's plans board chairman.

#### ASA industrial gas equipment project is recommended

At a recent general conference in New York, called by the American Standards Association, repre-

sentatives of 17 national trade associations and technical societies voted to recommend the establishment of an American Standard on installation and utilization of industrial gas equipment.

The conference recommended that the project be sponsored by the American Gas Association. Suggested scope was: "Establishment of basic standards for the installation, safe operation, testing, maintenance and nomenclature of industrial gas utilization equipment and such remote in-plant gas-air proportioning and mixing equipment

that may be employed with that utilization equipment."

These standards are also to include in-plant gas piping supply systems and other engineering and design factors not covered by ASA's Project B31 (Code for Pressure Piping).

Actual work in the standards will be performed by the sectional committee, made up of representatives of all interested national groups substantially concerned with the subject.

# WANTED



## FOR HI-JACKING A TANK IN EVERY 20

That's right! There's a thief disguised as gas vapors left in tank cars. This thief can steal up to a full tank loss in every 20 cars, right out of your pocket.

Stop this thievery! Brunner LP Gas Transfer Units not only transfer all liquid to your storage tank but remove and liquify thieving gas vapors in the tank. It's also the efficient and economical way to load tank trailers and even discharge into storage tank of ultimate user.



Unless you're willing to take a one in twenty loss, write for free booklet that tells you how to transfer savings.

**GET BRUNNER  
LP GAS TRANSFER UNIT  
PROTECTION FOR THAT  
STOLEN TANK**

**BRUNNER DIVISION**  
DUNHAM-BUSH, INC.  
WEST HARTFORD 10, CONNECTICUT

**DUNHAM-BUSH**

MICHIGAN CITY, INDIANA • MARSHALLTOWN, IOWA • RIVERSIDE, CAL.

**hosi-x** BREWSTER, NEW YORK • TORONTO, CANADA • PORTSMOUTH, ENGLAND

### NEWS BRIEFS

A new edition of "What Everyone Should Know About the Advantages of Investor-Owned Gas Companies" points up the merits of competitive enterprise and the pitfalls of government ownership in an easy-to-understand manner. For further information and prices write the Order Department, American Gas Association, 420 Lexington Ave., New York 17.

Alberta Underground Storage Ltd. now has the capacity to store 15 million gal. of propane, butane and pentane in its underground caverns near Hughenden, Alta. Stocks of these gas byproducts are expected to be built up during the coming summer.

The bituminous coal industry, backed by evidence of coal's price and availability advantages over competing fuels, recently announced an intensified program aimed at moving into more factories, processing plants, schools, hospitals, office buildings, and related markets. An industry subcommittee's primary function will be to expand markets in new construction and to persuade present consumers of gas and oil to convert to coal.

### MERCHANDISING

A wall chart that moves the calendar 90 days ahead for retail appliance store merchandising and advertising planning has been printed as a service to dealers by the Norge Division of Borg-Warner Corp. It is available free through Norge distributors, Form No. G-460-4. Measures 11 in. x 20 in.

Caloric Appliance Corp.'s new kitchen-color-styling service, now offered to homemakers through local dealers, is the theme of a built-in dis-



● celebrating  
twenty years  
of service to  
LPG dealers...



● W. A. BADEN, PRESIDENT OF ANCHOR



● ANCHOR'S TULSA HEADQUARTERS STAFF

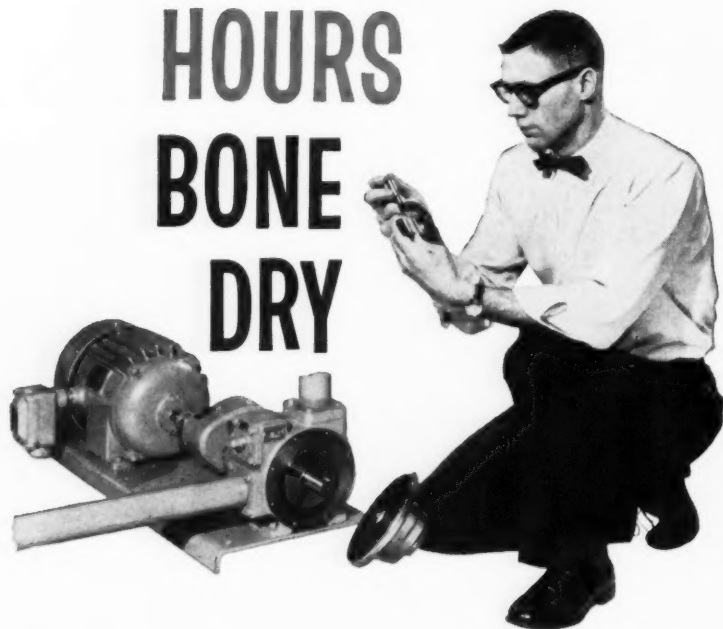
## ANCHOR

Over these twenty years Anchor has gathered excellent people, invaluable experience, and unparalleled facilities to serve you better. No matter where you are, or what your need for LPG, Anchor with twenty years of seasoning can serve you better. When you're thinking of a contract, think of twenty-year-old Anchor, and then call Tulsa, LUther 2-7261.

**ANCHOR PETROLEUM COMPANY**

TULSA  OKLAHOMA

# 2000 HOURS BONE DRY



## Blackmer Pump passes toughest test

When a customer asked us how well our pumps would wear, we had these facts to tell. In one of the toughest pumping tests ever devised, a 2-inch Blackmer pump was driven at top speed for 2000 hours, running absolutely bone dry. Vane wear was detectable only with a micrometer . . . proof positive Blackmer pumps can take it. And, even when vanes do show wear after years of use, they are easily and inexpensively replaced. Aren't these a couple of good reasons why you should use Blackmer pumps? Write for Bulletin 500.



"liquid materials handling"® equipment

# BLACKMER

/ liquefied gas pumps

BLACKMER PUMP COMPANY, GRAND RAPIDS 9, MICHIGAN

Find your Blackmer Man under "Pumps" in the Yellow Pages

## HIDY-BROWN ANNOUNCES

# BIG BUSINESS BUILDER FOR YOU!

Guarantee on-time delivery of gas to every customer whenever his supply gets low, and save 30% of bookkeeping and trucking costs, too. It's easy with the HIDY Degree-Day Recorder—the most accurate, simplest to install, operate and maintain Degree-Day system on the market. Please write for our booklet, "Ask The Man Who Has A HIDY Degree-Day Recorder."

Please indicate whether you are now using a degree day system.

**The HIDY-BROWN RECORDER CO.**

6988 Five Mile Road

Cincinnati 30, Ohio



play. Featuring the Beatrice West color service, the unit displays a single-bowl sink, a 30 in. ventilating hood, built-in range, and the company's new DR-4 countertop range. It is 55½ in. wide, 78 in high, and 26½ in. deep.

## DEALERS

Recent business changes in Kansas include the sale of the Humburg La-Crosse L. P. gas operation to the Cooperative Association of Bison, according to Glen Humburg, president of Humburg Co., Inc. Humburg's will continue to operate L. P. gas plants in Larned, Bazine, Russell and Hays. F. S. Johnson, Blish, Mize & Silliman Hardware Co., Atchison, announced the sale of that company's L. P. gas operation to William E. Trendel & Associates. The new company will be known as the EconoGas Co. and will be located in Atchinson. Hogan & Sons of Greenleaf was purchased by the Hoover Farm Gas Co. of Minneapolis, Kan. The new company will be called Hoover's Inc. and will be managed by James M. Hoover. The plant will remain in Greenleaf.

Arcadia (La.) Butane Co. Inc., LPG and household appliances, has been granted charter of incorporation listing capital stock of \$20,000. Sure Gas Inc., Owensboro, Ky., has been granted charter of incorporation, listing capital stock of \$200,000, as has Clyde Mudd L. P. Gas Co., Owensboro, listing capital stock of \$100,000.

White River Propane Gas Co. Inc., Batesville, Ark., has purchased the assets of Towe Gas Supply Inc. No change in personnel is contemplated at this time.

The board of directors of Petrolane Gas Service Inc., Long Beach, Calif., declared a quarterly dividend of 25 cents a share at a recent meeting. It was paid March 25 to shareholders.

## SUPPLIERS

Zenith Carburetor Division, Bendix Aviation Corp., announces new permanently installed LPG carburetor school at its factory, 696 Hart Ave., Detroit 14, Mich. A four-day course, starting April 4, will cover basic engine data, ignition, tune-up and complete instruction on LPG carburetion. The course is open to everyone in the industry. A registration fee of \$15 will be charged.

# STOP

HORSE 'N BUGGY LPG DELIVERY!



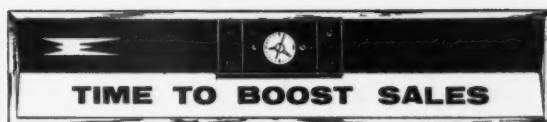
## INSTALL HANNAY REELS

Heaving the hose in the bucket box is as out of date as using a horse to haul the tank. Modern Hannay hose reels give you more safe deliveries per day, longer hose life and happier drivers. Full-flo 1½" I.D. inlet-outlet hubs guarantee minimum line loss through the reel for faster, safe product flow. Ask your tank truck builder or LP-Gas equipment supplier about Hannay reels for your trucks, or write for complete catalog.



CLIFFORD B. HANNAY & SON, INC., WESTERLO 3, N. Y.

APRIL, 1960



WITH  
**COLOR BACKGUARDS**



## NEW! BACKGUARDS NOW! IN 6 COLORS

Exclusive with *Enterprise* Centennial Styleline Ranges

You'll hit a new high in sales with Enterprise Centennial Styleline Ranges . . . because colorful backguards boost business! Every housewife wants the range with the backguard that matches her kitchen and electric appliances! They sell!

Interchangeable backguards come in 6 Decorama colors and white for every 36" Enterprise Styleline Range and every 30" Enterprise Styleline Range.

- Only \$1.00 more for Enterprise Ranges with color backguards.
- Great, sure-to-sell feature that'll pull in profits for you.



Coral Pink  
Canary Yellow  
Turquoise Green

Midnite Black  
Chinese Red  
Cocoa Brown



ORDER NOW!

**PHILLIPS & BUTTORFF CORPORATION**

NASHVILLE, TENNESSEE

100 ENTERPRISE-ING YEARS



On the occasion of Anchor Petroleum Co.'s 20th anniversary, officials of the firm gathered to celebrate the event. Standing in front of the ice sculpture symbolizing the event are, from left: G. M. Pennock, vice president in charge of truck sales; F. A. Shellhorn, vice president in charge of transportation; W. A. Baden, president; A. B. Williams, vice president in charge of procurement; E. A. Carley, vice president in charge of LPG sales; and J. W. Herod, vice president in charge of natural gasoline sales.

A plant for assembly and manufacture of automatic precision control devices for the gas appliance industry in Mexico City was opened last month by Robertshaw-Fulton Mexicana, S. A. de C. V. Russell F. Garner, recently with the firm's development laboratories at Irwin, Pa., has been named general manager of the new facility.

Advanced techniques in fire-fighting will be taught this summer at the test station of Ansul Chemical Co., Marinette, Wis. Twelve sessions of the company's fire school have been scheduled from May 16 to September 26. Each session will last two and one half days. Ansul fire equipment users who want to send representatives to one of the sessions should

contact the Ansul regional office in their area. Regional offices are located in Paoli, Pa.; Milwaukee, Wis.; Cleveland, Ohio; Kansas City, Mo.; and Burlingame, Calif.

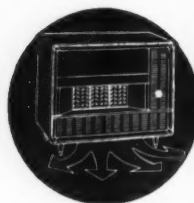
Ascot Gas Water Heaters Ltd. has moved from Cleveland, Ohio, to 222 West Pittsburgh Ave., Milwaukee. Operating under a new name, Ascot Gas Water Heaters Inc., the firm is the national sales and distribution headquarters for all Ascot products in the U. S.

Johns-Manville has entered into an agreement for the cash purchase of Franklin Plastics, Inc., Franklin, Pa., manufacturers and distributors of extruded plastic pipe, it was announced recently. Dixon P. Downey, owner and president of Franklin Plastics, will continue operation of Gulf Stream Plastics Inc., Hialeah, Fla., for the manufacture of fittings for plastic pipe and custom moulded industrial components.

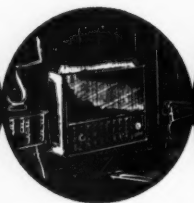
Sid Harvey's Trouble Shooting Guide, a new booklet containing information on troubles that have often stumped servicemen, has just been published. For further information and prices write Sid Harvey Inc., Valley Stream, N. Y.

## Only TEMCO Gas Heating Equipment has Adjustable Automatic Blower Control ...

... plus all of these outstanding features.



True Heat-on-the-Floor



Modern, Low-Silhouette Styling



Center Burner Pilot



Ceramiclاد Heat Exchanger



Out Front Controls

TEMCO's Adjustable Automatic Blower Control permits your customer to adjust his TEMCO blower to suit his own needs. This eliminates profit-cutting blower adjustment service calls. ⬆ Get the complete story on Adjustable Automatic Blower Controls and other TEMCO sales-making features from your TEMCO distributor. ⬆ He will also tell you about National TEMCO Month, the gas heating industry's biggest promotion for 1960. ⬆



# TEMCO, inc.

NASHVILLE 9, TENNESSEE  
GAS HEATING SPECIALISTS FOR THE NATION





ELMER E. GARNSEY—from Southwestern sales manager for a firm in the same field to a newly created post of vice president in charge of sales, Trinity Steel, Co., Dallas, Texas.

TOMMY R. BROCK—from assistant sales manager to sales manager, Temco Inc., Nashville, Tenn. KENDRICK SHINNICK—from sales department to assistant sales manager.

O. B. CECIL—from assistant general manager to general manager, Master Tank & Welding, Dallas, Texas. J. E. STAFFORD—from sales representative to sales manager of the LPG and NH<sub>3</sub> Department, Master Southern Division, and FRED C. CATRON—from sales engineer to sales manager of pressure vessels and special products division. W. E. TRENDL is the Midwest territory's new assistant sales manager.

SAMUEL A. WILSON—from assistant to the vice president and superintendent of the metals and chemical division, Fansteel Metallurgical Corp., to manager of manufacturing, Maloney-Crawford Tank & Manufacturing Co.

RICHARD H. BALK—from a sales representative in the Columbus, Ohio, territory, to district manager for the Minneapolis territory, Janitrol Heating & Air Conditioning, a Division of Midland-Ross Corp. The district includes Minnesota, North Dakota, Montana, and sections of the states of South Dakota, Wyoming and Wisconsin.

WALTER S. WADDINGTON has retired as standard lines division sales manager, William Wallace Co., Belmont, Calif. Semi-retired, he now assumes the duties of special assistant and sales consultant in the division. PETER C. BACIGALUPI—from assistant sales manager of the division to sales manager.

ROBERT E. MOYER—from vice president in charge of manufacturing, Tappan's Canadian affiliate, Gurney Products Ltd., to director of purchasing, Tappan Co., Mansfield, Ohio.

# Have You Tried a **RIDGID** Hex Wrench Yet?



the  
Perfect Mate  
for your  
**RIDGID**  
Pipe Wrench!

Six Sizes with Maximum Jaw  
Openings of 1/8", 1/2", 1 1/4",  
2 1/2", 3 1/2" and 4 3/4" across flats.

## Finest of All Adjustable Smooth-Jaw Wrenches

### MORE GRIPPING POWER...

for all nuts. Puts a wrap-around grip on hexes that just won't slip. Because you're pulling with at least three flat sides at once, you'll never round off shoulders. Works on square nuts, valve packing nuts, unions and gas cocks and flat shapes, too. Smooth jaws won't even mar polished or plated surfaces.

### RUGGED CONSTRUCTION...

built good and solid. Thin but extra-strong jaws slip into tight places. The first time you use a hex wrench you'll know that here's a wrench you'll use for a long, long time. It's every bit as rugged as your familiar **RIDGID** Pipe Wrench.



**No. E-110 Offset Hex Wrench**  
Big Jaw, Short Handle for Sink and  
Tub Drain Nuts—Maximum Jaw  
Opening—2 1/2" across flats



**No. E-11 End Hex Wrench**  
Offset Jaw for Easy Work in Tight  
Places  
Maximum Jaw Opening—  
1 1/2" across flats.

From experience you know it's easier to work with the best of tools. Order your **RIDGID** Hex Wrenches from your Supply House today!

# RIDGID

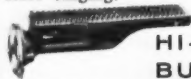
The Ridge Tool Company, Elyria, Ohio, U.S.A.

EVERYONE'S A CUSTOMER  
FOR A DEARBORN



**"Why not deliver it in  
person - tonight!"**

Of course . . . when you're selling Dearborn, customers take you right into their homes. Just like the girl in the illustration, waiting eagerly for delivery of her new Dearborn. It's easy to see why, too, when you consider all Dearborn's great advantages, like the Cool Safety Cabinet and famous Hi-Crown cast iron burners that are guaranteed for life. So buy early and buy Dearborn. And be ready for your phone to start ringing.



**HI-CROWN  
BURNER**

A lifetime burner with an unrivaled performance record, the Dearborn Hi-Crown is so efficient, economical and trouble-free it will never warp or burn out!



The Dearborn Crest is the world's finest unvented gas area heater, a standard of quality for the heating industry.

**Dearborn®**

Get details of Dearborn's clean-cut selling policy from any of these regional sales offices: Atlanta, Chicago, Dallas, Los Angeles, San Francisco.



1960 Dearborn Store Co., Dallas

OLIVER FELLOWS—from sales representative, Jacobs Heater Corp., Athens, Ala., to district sales manager for Indiana, Ohio and Kentucky, Heil-Quaker Corp., Nashville, Tenn.

GERALD I. BOYCE—from a general accountant and a tax counsel with a nationally known firm of public accountants, to assistant to the president, Preway Inc., Wisconsin Rapids, Wis. HARRY G. MORSE—from assistant to the vice president in charge of manufacturing to contract sales manager. ROBERT T. POLZER—from sales representative to sales promotion manager. LOUIS P. SCHANOCK—from an administrative capacity to coordinator of sales research, and WIL- LARD JOHNSON—from a manufacturers' representative in the appliance field to director of utility sales.

ERNEST W. WILLIAMS JR.—a professor of transportation in the Graduate School of Business, Columbia University, has been elected a director of ACF Industries Inc., New York.

STANLEY H. HOBSON—chairman of the board of Geo. D. Roper Corp., Kankakee, Ill., has also been elected president. W. G. BUKSNIK has been elected treasurer. JOHN P. WRIGHT has resigned as president and director and WILLIAM C. WAGGONER has resigned as vice president, treasurer, and a director.

JUDSON S. SAYRE—from president to chairman of the board and chief executive officer, Norge Division, Borg-Warner Corp., Chicago. ROBERT H. QUAYLE JR.—from executive vice president to president. HAROLD P. BULL—from vice president of sales to vice president and assistant to the president. WALTER C. FISHER—from director of marketing to vice president of sales.

DOUGLAS KIRKPATRICK—from supervisor of customs and traffic to a newly created position as sales representative for the L. P. Gas Division, The Weatherhead Co. of Canada Ltd., St. Thomas, Ont.

CHARLES E. HOFFMAN—from assistant sales manager, Consolidated Industries Corp., to sales manager, Bard Manufacturing Co., Bryan, Ohio.

JAMES WILLIAM YOUNG — from branch manager to assistant division manager, Maloney-Crawford Tank & Manufacturing Co., Lafayette, La. He will be in charge of operations in Arkansas, Louisiana, Mississippi and Alabama.

FRED FROST—from a vice president of Pyrofax Gas Corp., to assistant to vice-president, administration, for the parent company, Union Carbide International, New York.

DONALD M. PHILLIPS—from manager of Beecher's Gas Service Inc., Canandaigua, N. Y., to district manager, western New York, Fuelane Corp., Liberty, N. Y. FRED BALLARD—from field service representative in western New York, Fuelane, to manager of Beecher's Gas Service Inc.

WESLEY R. MOORE, assistant to the president, has been elected a vice president of Minneapolis-Honeywell Regulator Co., Minneapolis, Minn. KARL W. SCHICK, sales manager of the Residential Division, has been named a vice president of that division. Appointed vice presidents of their sales regions are FRED KAISER, manager of the eastern region, with headquarters in New York; C. L. PETERSON, manager of the central region, with headquarters in Cleveland, and T. S. CARLEY, manager of the midwest region, with headquarters in Chicago.

Consolidation of the executive staffs of Waste King Corp., Los Angeles, and its year-old subsidiary, Cribben & Sexton Co., has been announced by A. L. HAGGARD, vice president - marketing. Haggard will be assisted by two vice presidents-sales, ELM WEINGARDEN and RONALD J. SHEPHERD. The national staff includes HAROLD FATT, director of merchandising; KENNETH DUPREE, manager-commercial equipment; ALAN BARNHART, manager-domestic cooking equipment; NAT GRANAT, director of new construction sales; MRS. SYLVIA WHITE, director of consumer relations; and ROBERT CLARK, general service manager. RICHARD SCHAUB has been appointed national sales administrator; JOHN HASSETT, sales promotion manager; and ROBERT MICKELS, advertising manager.

**DEATHS**

RICHARD W. McKEEN, 39, of Prairie Village, Kan., died suddenly, January 17, in Denver, Colo., shortly after arriving to attend a sales convention. He was regional manager of the Skelgas Division of Skelly Oil Co.

WILLIS L. O'ROURKE, 46, manager of the Hattiesburg (Miss.) Branch operations of Fowler Butane Gas Co., was killed instantly on January 25, when a car he was driving was struck by a train. He had been with the Fowler Co. for 20 years.

# NEW AMERICAN® WC-45-LPG



## *Designed to Provide Ideal Metered Service for Average LP-Gas Loads*

The modern design and attractive appearance of the WC-45-LPG pleases customers instantly — and keeps them satisfied throughout years of dependable service. Its sturdy, light weight, welded steelcase construction includes these quality features to assure accurate measurement from pilot load to rated capacity, at lowest possible maintenance cost:

- Internal, counter-type, tamperproof index for easy meter reading.
- Removable soldered top for easy meter accessibility.
- Bellows-type, molded Duramic diaphragms for LP-Gas service.
- Long-lasting, one-piece Nylon valve guides.
- Lifetime corrosion protective finish.
- One-piece, corrosion and impact resistant plastic index box glass ends breakage problems.
- Wall mounting lugs for quick installation.
- Tangent adjustable through meter inlet without removing top.
- Synthetic grommet-type flag rod seals for minimum friction.
- Oil impregnated, porous bronze bushings.

Rated capacity 45 cfh propane and 40 cfh butane at ½-inch w.c. differential — 5 psi working pressure — ¼-inch F.P.T. connections — shipping weight 8 lb. F.O.B. Philadelphia.

Ask your American representative for full details.



**AMERICAN®  
METER COMPANY**  
INCORPORATED • ESTABLISHED 1921

General Offices: Philadelphia 16, Pa.  
Sales Offices in Principal Cities

# OPERATING AN L.P. GAS Business

## *A Handy Reference Library of 12 Practical Booklets*

Each booklet is a collection of the best articles on the titled subjects which have appeared in Butane-Propane News. 15 or more subjects under each cover, from 48 to 64 pages of information written by authors recognized for their experience in the industry and their technical know-how.

1. Problems of Management
2. Bulk Plant Design and Operation
3. Fuel Transfer with Pumps & Compressors
4. Servicing Domestic Appliances
5. Consumer Bulk Systems
6. Selling
7. Commercial Applications
8. Industrial Applications
9. Farm Applications
10. Poultry Brooding and Incubating
11. Power
12. Town Plants

*Available separately or as a set*

## ----- ORDER FORM -----

### BUTANE-PROPANE News

198 S. Alvarado St., Los Angeles 57, Calif.

Please send me, postpaid, the booklets ordered below.

I enclose \$..... in full payment.

*(In California add 4% sales tax.)*

☐ Complete set of 12 .....\$8.55

### INDIVIDUAL BOOKLETS

- |                                       |  |
|---------------------------------------|--|
| <input type="checkbox"/> No. 1—\$1.00 | <input type="checkbox"/> No. 7— .50    |
| <input type="checkbox"/> No. 2—\$1.00 | <input type="checkbox"/> No. 8— .50    |
| <input type="checkbox"/> No. 3—\$1.00 | <input type="checkbox"/> No. 9— .50    |
| <input type="checkbox"/> No. 4—\$1.00 | <input type="checkbox"/> No. 10— .50   |
| <input type="checkbox"/> No. 5—\$1.00 | <input type="checkbox"/> No. 11—\$1.00 |
| <input type="checkbox"/> No. 6—\$1.00 | <input type="checkbox"/> No. 12— .50   |

Company .....

Name .....

Address .....

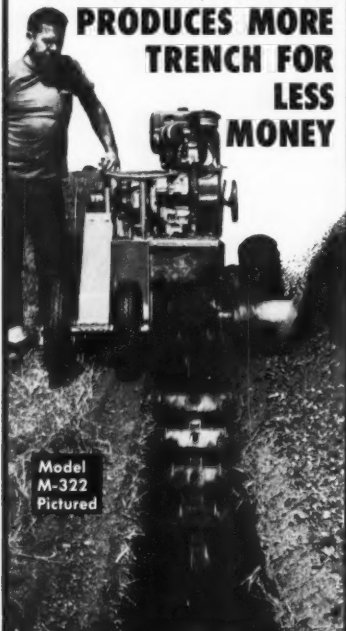
City & State .....

# "More or Less" THE BEST



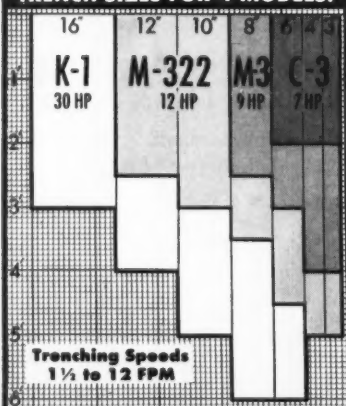
Other trenchers cost "More or Less"  
Other trenchers dig "More or Less"

**BUT DITCH WITCH  
PRODUCES MORE  
TRENCH FOR  
LESS  
MONEY**



Model  
M-322  
Pictured

## TRENCH SIZES FOR 4 MODELS:



- USE FOR:
- Utility Services
  - Gathering Lines
  - Signal Lines
  - Sewer Laterals
  - Road Crossings
  - Sprinklers
  - Footings, etc.

**CHARLES Machine Works, Inc.**  
616 B Street • Perry, Okla.

To Locate Distributor, Look Under "Contractors Equipment" in 1960 Metropolitan Telephone Directory Yellow Pages for Ditch Witch Trade-mark; or Call Collect FE 6-4404, Perry, Okla.

## Picture meter statements

NEAD & HOLLIDAY, Tateville, Ky., recently had its postmistress "clear" a new form of meter cards on which to mail the company's statements each month.

The three cards being used at present feature pictures of the firm's customers. They include a couple in Nancy, who use LPG for brooding chickens in a modern poultry house; a modern Burnside home, and a super service station just south of Eubank.

Another home will be featured this spring . . . then LPG carburetion at a large lumber yard

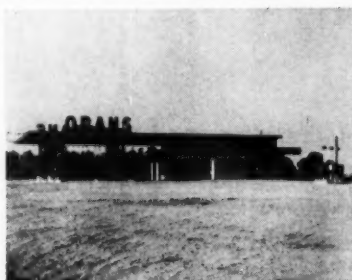
on three fork lifts . . . and later a picture of the firm's bulk storage plant.

"These have occasioned quite a bit of comment since we put them into service recently," according to Miss Frances L. Holliday, partner of Nead & Holliday, "and best of all, they are less expensive to prepare and mail than the usual statements in envelopes.

"We will have to admit that the form on the reverse side is copied from the REA, which precedent was in our favor when our postmistress requested a ruling."

### ORAN'S SUPER SERVICE STATION

On New Highway 27—Just South of Eubank



Uses **BLUE BLAZE LP GAS** for—  
Winter "Comfort" Air Conditioning

Two of the postcards which Nead & Holliday use to bill its customers.

### MR. AND MRS. ARNOLD TURPIN

Nancy, Kentucky



Uses **BLUE BLAZE LP GAS** for—  
Brooding Chickens in Modern Poultry House

### NEAD AND HOLLIDAY

Box 37

TATEVILLE, KENTUCKY

Phone Burnside 95

24 HOUR SERVICE

For The Past 23 Years

### NEAD AND HOLLIDAY

Box 37

TATEVILLE, KENTUCKY

Phone Burnside 95

24 HOUR SERVICE

For The Past 23 Years



## CALENDAR

**All associations  
are invited to send  
in the dates of their  
forthcoming meetings**

**April 5**—Wisconsin LPGA Convention—Whiting Hotel, Stevens Point, Wisc.

**April 7-8**—Western Canada LPGA Annual Meeting—Calgary.

**April 10-11**—15th Annual Kansas LPGA Convention and Business Meeting—Allis Hotel, Wichita, Kans.

**April 11-12**—North and South Dakota Joint Convention—Eagles Club, Bismarck, N. D.

**April 12-14**—Tenth Midwest L. P. Gas Service School—Iowa State College, Ames, Iowa.

**April 22-23**—Oklahoma LPGA Spring Meeting—Lake Texhoma Lodge, Lake Texhoma, Okla.

**April 24-25**—Association of Nebraska LPG Dealers Annual Convention—Castle Hotel, Omaha, Neb.

**April 24-26**—Mississippi LP-Gas Dealers Association—Edgewater Gulf Hotel, Edgewater Park, Miss.

**April 25-28**—Florida LPGA Management Conference, University of Florida, Gainesville, Fla.

**April 27-29**—Natural Gasoline Supply Men's Association 39th Annual Convention—Rice Hotel, Houston, Texas.

**May 1-4**—National LPGA Convention and Trade Show—Conrad Hilton Hotel, Chicago.

**May 9-11**—National Tank Truck Carriers Inc. Annual Convention and Tank Truck Equipment Show—Hotel Mark Hopkins, San Francisco, Calif.

**May 16-18**—Central States L.P. Gas Carburetion School—Kansas State University, Manhattan, Kans.

**May 16-20**—NFPA Annual Meeting—Hotel Queen Elizabeth, Montreal, Que.

**May 22-25**—Industrial Heating Equipment Association Inc. Annual Convention—The Homestead, Hot Springs, Va.

**May 29-31**—Mid-South District LPGA Convention and Trade Show—Peabody Hotel, Memphis, Tenn. (Arkansas and Tennessee will hold their annual state meetings during this convention.)

**June 2-3**—Institute of Appliance Manufacturers Convention—Netherland Hilton Hotel, Cincinnati, Ohio.

**June 5-10**—Florida LPGA Technical Conference University of Florida, Gainesville, Fla.

**June 6-9**—Iowa Midwest L. P. Gas Engine School—Iowa State College, Ames, Iowa.

**June 9-11**—Western Liquid Gas Association Convention and Trade Show—Statler Hotel, Los Angeles, Calif.

**June 12-13**—Butane-Propane Institute of Louisiana Annual Convention—Monteleone Hotel, New Orleans, La.

**June 13-15**—American Society of Heating, Refrigerating & Air Conditioning Engineers Annual Meeting—Vancouver, B. C., Canada.

**June 13-15**—2nd Annual Mo-Ill L. P. Gas Exposition—Chase Hotel, St. Louis, Mo.

**June 26-28**—Minnesota LPGA Summer Convention—Grand View Resort near Brainerd, Minn.

**June 27-28**—Montana-Wyoming Convention—Jackson Hole, Wyo.

**July 17-19**—Colorado Convention—Boulder, Colo.

**July 24-26**—Alabama LPGA Convention—Grand Hotel, Point Clear, Ala.

**August 7-9**—New Mexico Convention and Trade Show—Albuquerque, N. M.

**August 14-16**—Kentucky LPGA Convention—Kentucky Hotel, Louisville, Ky.


**August 21-23**—Idaho, Nevada, Utah Tri-state Convention and Trade Show—Shore Lodge, McCall, Idaho.

**September 11-13**—Florida LPGA Annual Convention—Hotel Robert Meyer, Jacksonville, Fla.

**October 17-21**—48th Annual National Safety Congress. Sessions on industrial safety scheduled for the Conrad-Hilton, Pick-Congress, Sheraton Towers, Morrison and LaSalle hotels; traffic safety, Pick-Congress; commercial vehicle and transit safety, LaSalle; farm safety, Palmer House; and school and college safety, Hamilton, Chicago, Ill.

*For the Best in Heating Comfort*

# HOTTEST GAS BURNER EVER!



**GIVES UP TO 40% MORE USABLE HEAT**

**TRIPLE HEAT—INFRA-RED  
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**AUTOMATIC...SILENT...  
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Build with the Outstanding Gas Burner and Complete FREEMAN-Burdett Gas-Fired Plant... Get the most Profitable Proposition. Get away from Cut-Throat Competition.

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Illinois Iron & Bolt Co. (Established 1864) Carpentersville Ill.

## FREEMAN-Burdett RADI-HEAT

L. P. Gas Heated  
GAS Conversion BURNERS and PLANTS



For further information on any items in this section use the convenient Univac Readers' Service postcards on pages 81, 82.

## New Products and Free Literature



### Outdoor gas lamp sells as a complete package

Circle 1 on Readers' Service Card

Outdoor gas lamp (GEC 470), made entirely of aluminum, will not rust. Comes complete with eagle ornament, mantle, burner, on-off valve, regulator, 8-ft post. Modern Home Products.



### Enclosed feed tubing cutters can't jam with chips or dirt

Circle 2 on Readers' Service Card

Two tubing cutters (GEC 770) feature fully enclosed feed screws that can't jam with chips or dirt. Nos. 105 and 205, they give quick, clean cuts. Fold-in reamer is always handy. Ridge Tool Co.

### Free samples of processed mineral clay available

Circle 3 on Readers' Service Card

A sample of a specially processed sanitary mineral clay (GEC 500) for absorbing oil and grease is offered free. Oil Spunj is processed in granular form. Spread on wood, metal, or concrete floors, just  $\frac{1}{8}$  in. thick, it absorbs soluble oil, lubricating oil, grease, acids and chemicals. It stays on the floor until saturated, then is easily swept off. Can be re-used with soluble oil. Canfield Oil Co.



### New valve converts cylinders to bulk-type operation

Circle 4 on Readers' Service Card

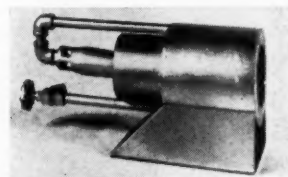
The new 2030 Uni-Pac valve (GEC 820) provides an easy switch to bulk-type operation. Lightweight and compact, it combines a service valve, relief valve, outage gauge and back check filler valve, in one completely forged unit. The valve is designed to provide faster filling with continuous vapor withdrawal, and with the extra-large relief valve capacity of 731 cu ft per minute, it can be used on ICC cylinders of over 200-lb propane capacity. Selwyn-Pacific Co.



### Vaporizer interchanges with models in the same housing

Circle 5 on Readers' Service Card

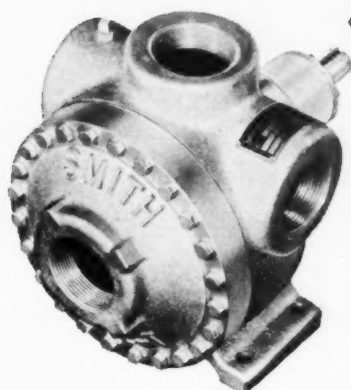
An LPG vaporizer-primary stage regulator (GEC 100) interchanges in the field with all previous models in the same housings. All of the vaporizer's heat is applied to the liquid stage of the fuel. The regulator stage of this new unit has no adjustment. Zenith Carburetor Division, Bendix Aviation Corp.



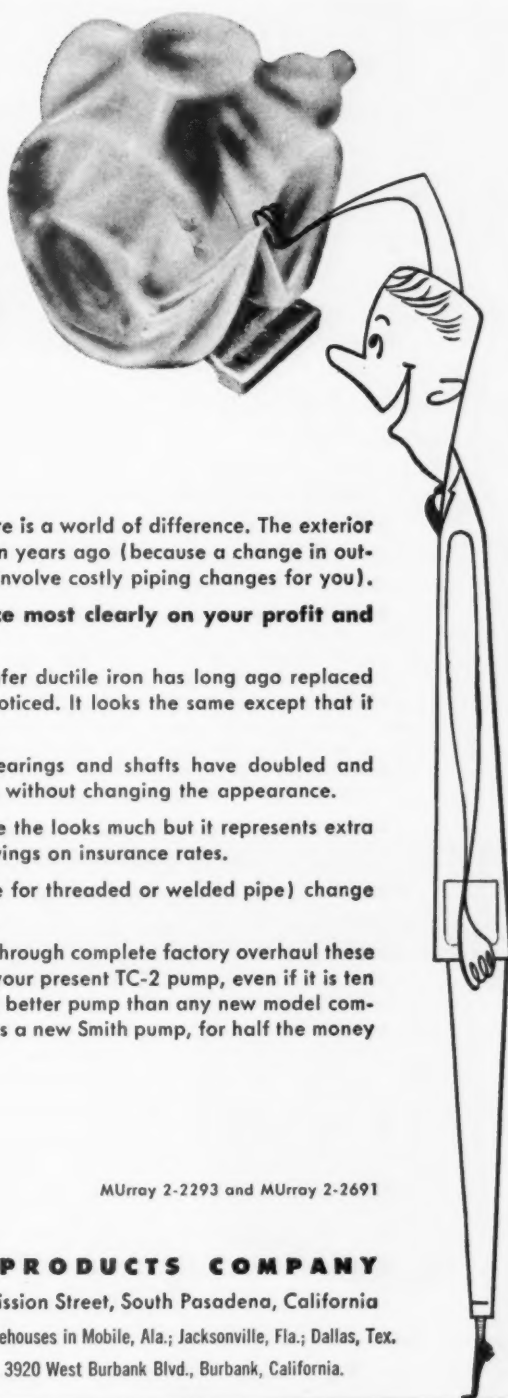
### Liquid L. P. gas burners rated to 2 million Btu

Circle 6 on Readers' Service Card

Two new liquid L. P. gas burners (GEC 080) have been introduced for tar kettles, aggregate driers, asphalt machines, grain driers, etc. Model TK-40-A is rated at 1.25 million Btu at 30 lb pressure and the Model TK-150-A is rated at 2 million Btu at 30 lb pressure. Wemco Products.



## ◀ **THE OLD** **AND** **THE NEW** ▶ **SMITH** **LPG TRUCK** **PUMP**



For delivery truck service  
where flexibility is desirable.  
20 GPM at 500 RPM or  
35 GPM at 900 RPM  
model TC-H



For average  
truck service  
50 GPM model TC-2  
Flanges Available



For "high flow"  
delivery truck service  
100 GPM model TC-3  
Flanges Available



For trucks with  
automatic transmission  
50 GPM model ATC-2  
100 GPM model ATC-3

They may look alike, but there is a world of difference. The exterior is much the same as it was ten years ago (because a change in outside dimensions would only involve costly piping changes for you).

**You can see the difference most clearly on your profit and loss statement.**

The fact that the tougher, safer ductile iron has long ago replaced cast iron probably went unnoticed. It looks the same except that it is practically indestructible.

New materials for gears, bearings and shafts have doubled and tripled pump life expectancy without changing the appearance.

The U.L. label doesn't change the looks much but it represents extra value in safety and often savings on insurance rates.

The **STEEL** flanges (available for threaded or welded pipe) change only the piping cost.

Here's the best news of all: Through complete factory overhaul these improvements can be put in your present TC-2 pump, even if it is ten years old. You end up with a better pump than any new model competitive make, and as good as a new Smith pump, for half the money of a new pump.

**R.S. SMITH**  
**QUALITY**

Murray 2-2293 and Murray 2-2691

**PRECISION PRODUCTS COMPANY**

1135 Mission Street, South Pasadena, California

Southeastern Distributor: Pond-Johnston Inc. Warehouses in Mobile, Ala.; Jacksonville, Fla.; Dallas, Tex.

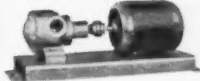
Western States Distributor: Teeco Products, Inc., 3920 West Burbank Blvd., Burbank, California.



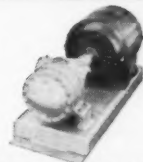
Will fill all small tanks  
as fast as any larger pump.  
100-lb. cys. in 4 minutes or less.  
20-lb. cys. in 1 minute or less.  
fork lift tanks no problem.  
10 GPM models EC-1, EG-1,  
MC-1, and GC-1.  
15 GPM model EC-H.



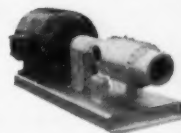
For small volume transfer work.  
20 GPM model MC-1044  
35 GPM model MC-1044H



For medium volume transfer.  
50 GPM model MC-2  
or MC-2Q (higher pressure,  
quiet running)



For large volume transfer  
100 GPM model MC-3  
Flanges Available



For high capacity loading  
150 GPM model MC-4



### Furnaces feature sectional type heat exchangers

Circle 7 on Readers' Service Card

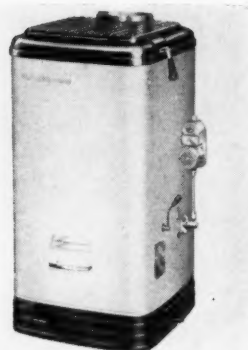
A series of highboy and counter-flow gas-fired furnaces (GEC 420) feature sectional type heat exchangers and ribbon burners. Available in 75,000, 100,000, 125,000 and 150,000-Btu input. Cabinets are baked green hammertone enamel with white fronts, 57 in. high and as narrow as 14½ in. All units are adaptable to air conditioning and have air deliveries for matching to any type residential duct system. Bard Manufacturing Co.



### One-man operated trencher has five digging widths

Circle 8 on Readers' Service Card

A one-man operated trencher (GEC 210), Model MA-2 Trench Devil, can be easily skid-loaded on pickup trucks or small trailers. Weighing approximately 1080 lb, it may be also transported for short distances under its own power, at 3 miles per hour. There are five digging widths—2¾, 3½, 4, 6 and 8 in., up to 54 in. deep. Digging speed is variable from 0 to 1200 ft per hour in either direction. A new depth marker accounts for fast, accurate trenching. Arps Corp.



### Domestic incinerator has a dual-purpose gas burner

Circle 9 on Readers' Service Card

A smokeless-odorless type of domestic gas incinerator (GEC 440), Model L-15, is for disposal of food waste and burnable trash. It has a full fire brick lining that is guaranteed not to rust, buckle, or burn out. The total input of the unit is 26,500 Btu per hour; 14,500 Btu are used in the primary burning section and 12,000 Btu in the secondary or "after-burner" section. A "Basotrol" automatic clock timer controls main burner operation. Locke Stove Co.

# Humphrey

## CIRCULATORS WITH "TOPTROL" GIVES MORE COMFORT WITH 3-WAY HEATING!

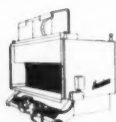


Humphrey presents two new 1960 circulators: the Director and the Radiantfire, both featuring the exclusive "Toptrol"—the top-mounted regulator that lets you adjust heat from table height. Humphrey circulators give you clean, warm air from the top, front and bottom . . . for perfect, even circulation of heat.

OTHER **ARKLA** GAS APPLIANCES :



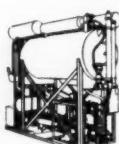
UNIT HEATERS



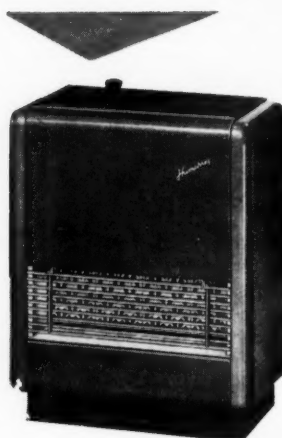
FURNACES



GAS AIR CONDITIONERS



WATER CHILLERS



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**HUMPHREY DIVISION • ARKLA AIR CONDITIONING CORP.**  
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### Built-in ovens are equipped with low-temperature control

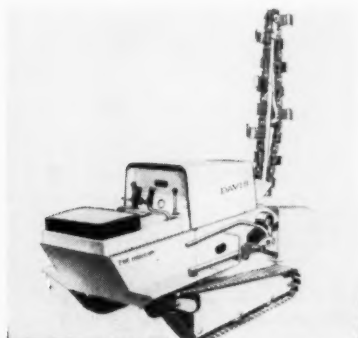
*Circle 10 on Readers' Service Card*

The Robertshaw-Flame Master low temperature oven control is now available on Preway's built-in gas ovens (GEC 240). Chief feature of the control is its ability to keep cooked foods at a "ready-to-serve" temperature without losing flavor or juiciness. Another use of the 140 deg. oven control is to hasten the thawing of frozen foods without drying-out or flavor loss. Plate warming is also an easy trick with the control standing guard. Preway Inc.

### Wall heaters feature sealed combustion system

*Circle 11 on Readers' Service Card*

A completely new line of wall heaters (GEC 420) has been approved by the AGA for use on both L. P. and natural gas. They feature a "cool safety" cabinet, completely sealed combustion system, forward flow discharge louvers, lifetime cast iron burners, a 200 cfm counter-flow blower and either a self-contained or wall thermostat. Dearborn Stove.



### Crawler-type trencher does its own backfilling

*Circle 12 on Readers' Service Card*

A crawler-type trencher and backfill machine (GEC 210) features positive traction, hydraulic variable speed drive, instant forward

and reverse, and virtually effortless control of the complete trenching and backfilling operation. It digs 3 to 4 in. wide down to 66 in. deep; or 12 in. wide, 30 in. deep; and at varying widths and depths in between. Davis Manufacturing Inc.

### Indoor incinerator designed for light commercial loads

*Circle 13 on Readers' Service Card*

An indoor gas incinerator (GEC 440) features 4-bu capacity for light commercial installations. An

automatically-timed burner regulates the firing of the unit. A selector dial, with "wet," "medium" or "dry" setting, determines the timing for each individual firing. Cycles run up to four hours. The Majestic Co. Inc.

### Air conditioning may be added to seven furnaces

*Circle 14 on Readers' Service Card*

A new gas furnace line (GEC 420) includes 11 models in 75,000, 100,000, 125,000 or 150,000 Btu capacities. Seven of the units are

**This Great Lamp is  
Setting New Sales Records  
Wherever Dealers Show It!**

Choice of sparkling anodized copper, brass, or aluminum finish

All metal parts non-corroding aluminum

"Bere" mantle resists breakage due to vibration

Globes of heat-resistant oven-type glass

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**THE  
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This Humphrey Gas Lamp helps pay the rent for a great many LP Gas dealers. Superbly made — backed by more than 60 years' gas light engineering experience. Nationally advertised every month. Readily accepted, highly satisfactory in service, and a good profit maker. Choice of wall or ceiling mounted models. Put Humphrey lamps on display at your store, and your small investment in this fast selling accessory will open up a valuable new source of income for you.

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Please send full information and prices on Humphrey Gas Lamps.

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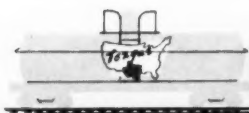
says L. M. Sinn  
Sinn Fuel Company  
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*"I've learned that building a successful LPG business depends, to a large extent, on the dependability and loyalty of your supplier. That's why I've been an exclusive Texas Natural dealer for the last four years . . ."*

## THE ONE AIM OF TEXAS NATURAL

is to provide its dealers with ever improving products and services. This is the **only** way that Texas Natural can help its dealers improve their operations and profits . . . and the **only** way the company can expect to continue to grow and develop.

This "do-it-better" complex at Texas Natural is one of the principal reasons more and more dealers are finding an exclusive Texgas contract the means to more profitable operations.

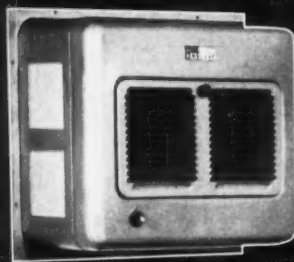


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Three sizes — 20,000 BTU — 35,000 BTU — 45,000 BTU

Approved by AGA, CGA, CSA, Leading Utilities and LP-Gas Marketers

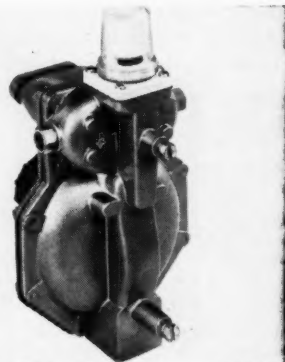
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MORRISTOWN

NEW JERSEY

heating-cooling furnaces that are especially designed for the addition of air conditioning. These models have a relay and a properly-sized transformer already wired into the furnace controls as well as belt-driven blowers designed to perform properly during the system's heating as well as cooling functions. Fedders Corp.



**Twelve problems can be solved with automatic regulator**

Circle 15 on Readers' Service Card

A new automatic regulator (GEC 700) makes possible the solution of at least 12 gas delivery problems, including changeover failure; diaphragm, cover and inlet leaks; freeze-ups; insufficient capacity; bleed through; faulty indicator readings; and inside corrosion. The compact design allows for easy under-hood installation, while offering more than 500,000 Btu capacity at only 25 psi. Selwyn-Pacific Co.



**Chrome-lined ovens resist cooking stains**

Circle 16 on Readers' Service Card

Oven wall panels (GEC 240) as reflective and bright as mirrors line the sidewalls, backs and doors of ovens in many range models. The chrome linings resist cooking stains, reflect added light into the



oven for easier seeing, are easy to keep clean, and give the oven a brand-new look that lasts the life of the range. Geo. D. Roper Corp.



**20 in. oven fits same size cabinet as ordinary built-ins**

Circle 17 on Readers' Service Card  
A 20-in. built-in oven, the Mark '20' (GEC 240), is the first full 20-in. oven to be so constructed that it will fit the same-size cabinet as ordinary built-in models. Fog-free panoramic oven and broiler windows, contemporary styled door handles, a three-dimensional glass panel, and removable oven and broiler doors for easier cleaning highlight the exterior design of the unit. Utility Appliance Corp.

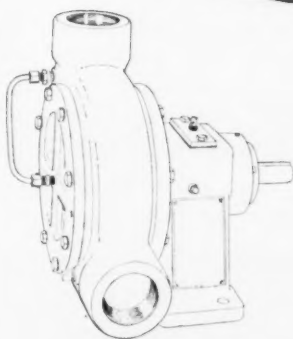


**Patented vent increases efficiency of wall-vent heater**

Circle 18 on Readers' Service Card  
The "Efficiency Guard" vent is a patented feature of a new direct wall-vent, sealed combustion heater (GEC 420). The waterproofed, wind-proof vent is said to guarantee continuous and uniform heat output under greatly varying wind and moisture conditions, including winds up to 30 miles per hour. Simplified installation of the 22,000 to 30,000 Btu heater requires only one hole through the wall. Telescoping vent adjusts to any wall thickness from 5 to 24 in. Williams Furnace.



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Superior performance . . . superior workmanship . . . That's Superior LP Gas Precision pumps. You get faster delivery . . . up to 100 g. p. m. single hose delivery from bobtails . . . up to 300 g. p. m. in bulk plants. Superior's many patented and exclusive features assure a long-lasting, low maintenance, superior performing pump. Let Superior prove to you a Superior pump is superior. Try one—under no obligation.

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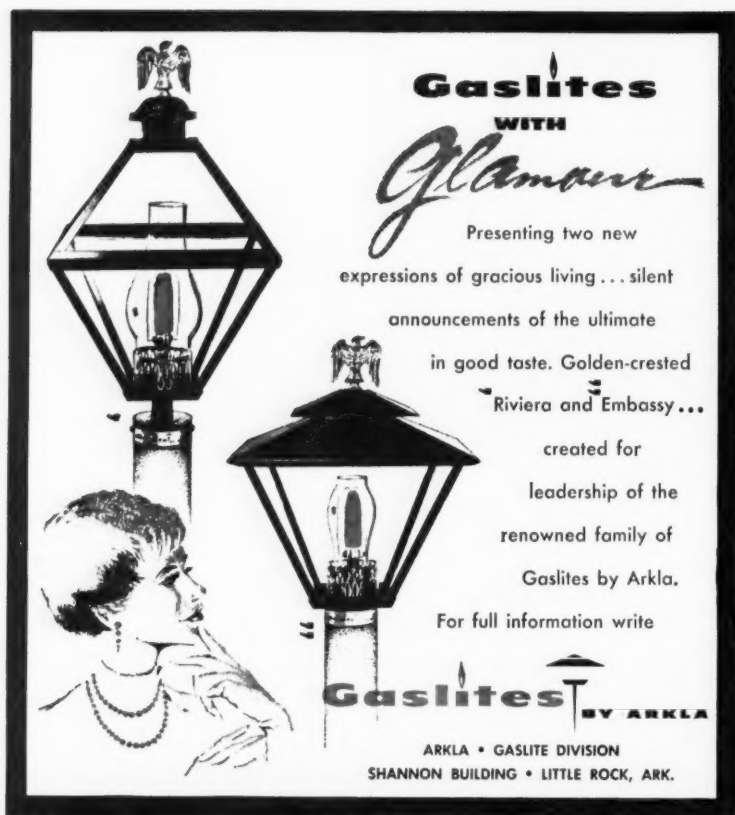
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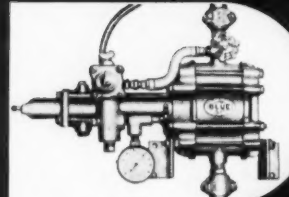
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**SEAL**

## Hawaiian door opener • Cont'd

sought the world over for its ruggedness and efficiency. Much of the fabricating work involves flame cutting of steel structural members and plates. When the previously-mentioned engineer was transferred to the island of Hilo he immediately proceeded to talk with Hilo Trailer about using LPG for cutting. After just one demonstration, the company converted its entire shop. The L. P. gas is supplied from a 115 gal. tank, which Isle-Gas refills automatically.

Our cutting customers frankly admit they are so pleased with LPG that they would willingly pay a premium for it. Instead, its actual cost is only one-eighth that of acetylene (in Hawaii, L. P. gas sells for roughly 40 cents per therm (100,000 Btu) against \$5 per therm for acetylene). And, there is no increase in oxygen consumption.

The advantages of LPG over acetylene for cutting have been well publicized, but we still find them most helpful in selling these jobs:

- Operating economy . . . both in cost of LPG and in the reduction of handling cylinders since one LPG cylinder outlasts six acetylene cylinders!

- Smooth cuts . . . slag is almost eliminated with LPG and what remains can be scraped off without chipping.

- No case hardening . . . the higher hydrogen content of LPG means that much less carbon gets into the molten metal so tool bits stay sharp!

- Reduced warpage . . . LPG's lower temperature reduces warping in thin plates, a real time-saver and quality-improver.

- Safety . . . narrow range of flammability, 2 per cent to 8 per cent, versus up to 80 per cent for acetylene, plus low pressure and less eyestrain.

When a shop begins saving 85 per cent of an accepted operating cost, its reception toward the money-saving product for other purposes is naturally likely to be favorable. And, of course, the gas supplier is looking for these other purposes! Load-wise, LPG for cutting is not very exciting; but it certainly opens the door! ■

## FREE LITERATURE

### Roofers' Catalog

Circle 19 on Readers' Service Card  
The 24-page Roofers' Catalog (GEC 215) No. 60 features many L. P. gas items. Included are a description of a new type L. P. gas thermostatic control which requires no batteries or electrical connections; a complete listing of LPG vapor and liquid type burners; and descriptions of the new pumper type kettles, and foam and cork coating kettles for insulation contractors. Aeroil Products Co. Inc.

### Gas detectors folder

Circle 20 on Readers' Service Card  
A 4-page folder describes a complete line of indicator, alarm and recording instruments (GEC 760). They are available in portable, semi-portable and permanent installation designs with provisions for single or multichannel service. Houston Instrument Corp.

### Ball valve brochure

Circle 21 on Readers' Service Card  
A 4-page brochure, entitled "At Your Service" is a pictorial synthesis of the complete Jamesbury "Double-Seal" ball valve line (GEC 820). It depicts the series of product data sheets available to all who desire further detailed information on any given valve type or accessory item. Jamesbury Corp.

### Metering pumps information

Circle 22 on Readers' Service Card  
A 28-page catalog describes the use of Pulsafeeder metering pumps (GEC 660) in process industries such as the L. P. gas industry. These pumps are designed to solve pumping problems where hard-to-handle chemicals or accurate metering is involved. Process Equipment Division, Lapp Insulator Co. Inc.

### Tape Seal brochure

Circle 23 on Readers' Service Card  
A 2-page brochure, containing free samples, describes industrial and commercial applications for Tape-Seal (GEC 730). It is a chemically inert plastic that is said to provide positive leak protection for all types of threaded pipe connections even under extreme conditions of temperature, pressure, or corrosive atmosphere. Friesland Plastics Co.

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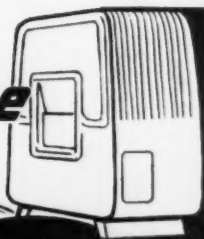


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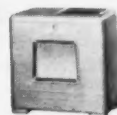
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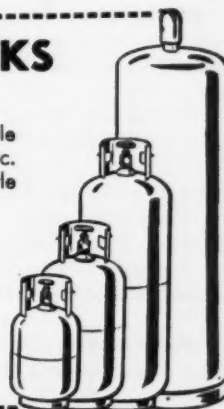
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## Mr. Shaffer

# learns about carburetion

WILLIAM T. HARPER • Eastern Editor

Murry Shaffer, service manager for the Johnstown (Pa.) Suburban Gas Co., has been in the LPG business for almost 20 years. But, he is convinced that he is never too old to learn. This same sentiment was shared by 94 other L. P. gas dealers who attended the Northeast LP Gas Carburetion Clinic in Harrisburg, Pa., last February.

Most of the students were, like Shaffer, almost completely without training in carburetion conversions. Shaffer recalled that his company had had only two limited previous experiences with LPG carburetion equipment. Both times, he had been faced with problems. He came to the clinic in hopes of learning the answers, as did all the students from the 13-state Northeastern area.

Under the guidance of a 14-man faculty, learn they did. In 20 hours of classes, divided equally between theory and practice, the students were led through a course that ranged from basic engine theory to installation layout and tank sizing. Such subjects as ignition systems, timing and valves, manifolds, and air filtration were covered on the way. In all, a dozen topics were presented.

Foundations for the clinic were laid last September 29 at the LPG Motor Fuel Management Clinic in Philadelphia. There the individual representatives of producers and equipment manufacturers had remarked on the obvious lack of knowledge of the basics of LPG carburetion conversion in the area. But, interest in this field had been increasing. Many of the area dealers wanted to learn about it "from the ground up."

When Moylan E. Brown, East-Central LPG district secretary, and his counterpart in New England, Louis S. Davis, became aware of their dealers' desires

for a clinic, they presented the idea to top management men, who were gathered at the Philadelphia meeting. Response was immediate and most favorable.

When the idea was presented to the area LPG educational committees, they too were enthusiastic. A carburetion clinic committee was set up to put the plan into action.

The committee went to work devising a curriculum. All available source materials were consulted, as were men who had organized similar clinics in the past.

One of the easier tasks in the planning activities was solicitation of students. "In only two announcement mailings," Brown reported, "we were completely over-subscribed. We originally planned the clinic for 60 students. After turning away 50 whom we couldn't find accommodations for (the Pennsylvania State Legislature was still in session in Harrisburg at the time) we still ended up with 95."

Such response is not surprising. Similar clinics have been springing up in other areas of the U. S. where carburetion is still in its early stages of development. All of them have proved popular.

Last month, for example, BPN reported on a school sponsored by Auto & Aero, Cincinnati, Ohio. Kentucky LPG has also launched schools, with the help of Auto & Aero.

Last month's article provided a complete course outline and explained the reasoning behind the course.

The following is a logical companion piece. Here we follow one of the students, Murry Shaffer, through the three-day course. You'll see what type of instruction Murry received and how it prepared him to handle the servicing problems of a growing carburetion load.



## Let's follow the course with him



Murry Shaffer is registered for the clinic by a member of the East Central District LPGA staff, Betty Clemens. Registration took place one day before the clinic began.



Here are the men who conducted the courses. Seated (left to right), Reber, Rice, Glidden, Platt. Standing, Landis, Redden, DuBois, Krebs, Fairbrother, Haynes, Foote, Brown and Lemon.

**M**MURRY SHAFFER and his fellow students arrived on the scene on Monday afternoon and registered for the clinic. The next morning at 8:15 Moylan Brown got the classroom session going with an introduction of the faculty and a brief explanation of the purpose of the clinic.

"This type of thing can only hope to stir your imaginations and get you interested in liquefied petroleum gas carburetion," he told the class. "And from that, we hope that it will lead to increased activity on your part in selling the fuel. The purpose of the clinic is to provide a basic understanding of LPG carburetion. There will be no advanced work in this course. We hope that will come later. Right here and now, we're starting from scratch."

George Platt, Phillips Petroleum Co., was the first instructor to face the class and his subject was, logically enough, basic engine theory. He told the students that what they were about to work with were dependable though highly complex engines. He continued by stating that though there are all types of engines, each has only one purpose: To convert fuel energy to mechanical power. Platt then went into the applications of engines

such as loads and speeds, and into the different types of engines manufactured. A short history of engines followed, starting with those of the 18th century.

To introduce the students to one of their competitors, Platt also touched on the theory and characteristics of the diesel engine.

Next, compression ratios and the effects of increases in compression ratios were discussed. The diminishing gain of efficiency as compression ratio rises was cited; Platt offered as illustrations the practical limits of 10-1 in actual usage and 12-1 for test purposes. Using a series of slides, he showed how a higher compression ratio uses less fuel and is more efficient. Octane ratings were covered next, and their effects on combustion shown. This was followed by a discussion on pre-ignition, which, as was pointed out, is sometimes confused with detonation.

Dave Reber, Beam Products, who like Platt was a member of the clinic committee and also on the faculty, spoke next on the principles of L. P. gas carburetion.

Ignition systems were covered next by T. Benenson, United Motors Service Division, and Claude A. DuBois, of Marvel-Schebler. Benenson showed a film strip en-

titled "Twenty Thousand Volts Under the Hood," explaining the operation of the four stroke cycle plus the operation of the coil, the distributor, the spark plugs and centrifugal and vacuum advance systems.

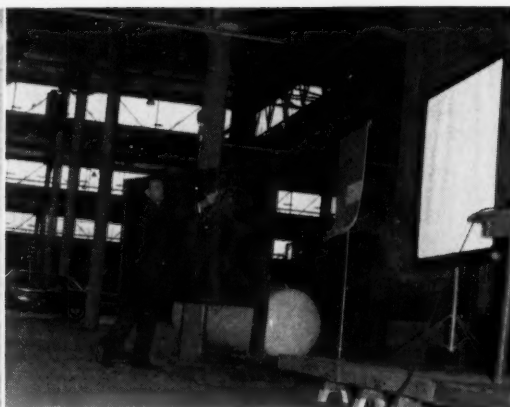
DuBois followed with a second film showing maintenance of these parts of the ignition system. DuBois claimed, "The ignition system is the economy factor in an engine." He made mention of the fact that there is no basic difference between the ignition system on L. P. gas powered engine and a gasoline powered engine. He did mention, however, that the propane-powered engine does need a higher ignition temperature and a hotter spark than is necessary for gasoline.

This was followed by a demonstration of how to calibrate the advance curve for LPG. It was noted that the figures used vary with the type of engine and the distributor being used. He informed the students that they as dealers can get distributors from the manufacturers with the advanced curve already calibrated for LPG. He informed them that this is better than trying to advance the curve themselves.

Calibrating the advance curve



Murry Shaffer, third from left, front, listens attentively with the rest of the student body at the opening session.



"The ignition system is the economy factor," Claude DuBois, Marvel-Schebler Division, told the students.



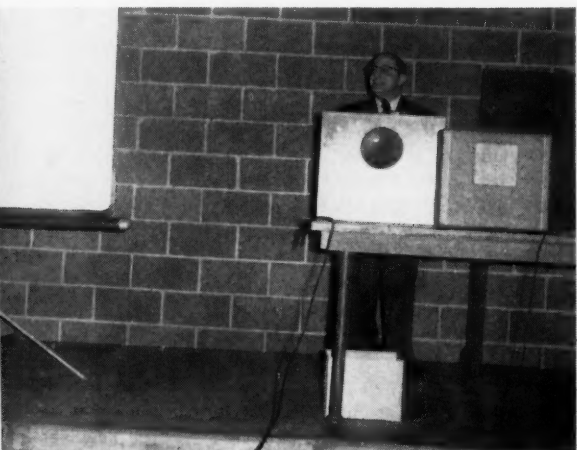
George Platt (in coveralls and pointing) discussed ignition problems with Shaffer and other students.



Dave Reber talks about installation problems in laboratory session. (Shaffer, in center background, looks on.)



The provisions of NFPA Pamphlet No. 58, relating to carburetion, were covered by Fred Fairbrother.



"A dirty filter will cause more problems in LPG-powered vehicles than in those using gasoline," Ray Landis told the students.



Platt (second from right), demonstrates use of instruments in ignition work.



A group of students gathers around Platt's automobile to inspect his LPG storage installation.

was cited by DuBois as being one of the biggest stumbling blocks in carburetion conversions. Compression ratios, he said, must also be changed in some cases. But if this is done, the spark plug gap should also be changed. This in turn means that the timing must be changed. And, he warned, when points are changed, the engine must be re-timed. In illustrating these factors, DuBois made the point that LPG powered engines should not be hard to start. In conclusion, he cautioned the students, "When having starting troubles, you should start checking the ignition system

first, all the way back to the battery."

B. D. Haynes of J & S Carburetor Co., Dallas, spoke next on valves and valve timing. Haynes started off with a review of gasoline-powered engines and then compared them to LPG-powered engines. He discussed briefly the parts of L-head engines and overhead engines. From there he went into some of the more common valve problems, including too-tight valves (caused by sticking valves and rockers), broken valve springs, incorrect valve timing, leaking valves, binding rocker-arms, lower end of tap-

pet scored or broken, rough cam surfaces, etc.

It was explained how these problems result in stalled engines, misfires, rough idling, preignition, after-burning and excessive engine noise. Haynes then told the students that the basic cause of valve troubles is the inability of the valve to dissipate its heat. Improper ring seating was also listed as being a major problem when converting to LPG carburetion. Haynes further warned the group that farm equipment and other off-the-road machines are subject to valve troubles due to their infrequent



As Shaffer looks on Jack Krebs (right) prepares to demonstrate distributor recalibration.



Jack Glidden uses a mock up installation to present his portion of the course on installation layout and tank sizing.



Reading from an article about Jerome Apt in the February 1960 issue of BUTANE-PROPANE News, Maylan E. Brown, East Central District Secretary of the LPGA, introduces Apt, the graduation speaker.

(including seasonal) use. But, he concluded on a hopeful note, "An engine on LPG carburetion is far less subject to valve failures."

The final subject to be covered during the first morning was manifolds. Tony Redden of Zenith Carburetor Division, Detroit, was the speaker. After informing the class that manifolds are easier to design and build for LPG than for gasoline, he stressed the fact that "the more air you get into the engine, the more power you will get from it. The colder the intake manifold, the more power will result. Cooling the intake manifold is one of the best steps you can take to get greater efficiency and power." This point he hammered at again and again.

He then described how, during a carburetion conversion, the intake manifold can be made cooler by one of several methods. Among the methods cited were the insertion of a stainless steel disc between the intake and exhaust manifold, thereby by-passing the "hot" spot chamber with the exhaust gases; and that which he described as the "best method," the purchase of special cold manifolds.

Redden's presentation was followed by a question-and-answer session that preceded lunch. One of the students asked:

**Q. Should the manifold be cooled on a fork-lift truck?**

A. (Redden) Yes, if it can be done economically. It would benefit the engine.

**Q. Can the same spark plugs be used on LPG-powered engines as are used on gasoline-powered engines?**

A. (Platt) Yes, except that the gap should be .002-in. closer. This creates a more positive spark to make the increased heat needed to fire LPG.

After lunch, Shaffer and his fellow-students were assigned to their first practical factors laboratory. The purpose of the laboratories was to enable the instructors to present material embracing (1) pre-conversion check, (2) conversion, and (3) practical application of tuning and adjusting. The class was divided into eight groups and each was sent with an instructor to observe a vehicle that had been converted. These vehicles included eight private automobiles owned by various members of the faculty, two fork-lift trucks and one International truck.

Shaffer was first assigned to one of the fork-lift truck positions. There Reber acquainted him and the other members of his group with problems of installation of the carburetion equipment. He covered the aspects of timing and compression ratio in fork-lift truck conversion. Through questions, he also touched upon the problems of powering over-the-road equipment and starting difficulties that might be met on a Thermo-King refrigerating unit.

#### Second Day

Harry Foote, Solgas Division, Sun Oil Co., Marcus Hook, Pa., got the second day's session off with a discussion on safe handling and fuel transfer. He emphasized to his audience that LPG, when carefully handled, is as safe as any other fuel. "But when carelessly handled, it is as dangerous as any other fuel." Foote explained to the students that it is "the human factors" that are responsible for most accidents. He laid the responsibility at the feet of LPG plant man-

agers to see that all necessary precautions for safety are understood by all employees.

He further stressed that Pamphlet 58 is only the minimum. "You can do a better job. All personnel should read Pamphlet 58, study it, and carry out its recommendations. There's nothing preventing you from going even further than Pamphlet 58 in safety precautions," Foote stated. He then listed a number of precautionary measures which should be observed. Among those was the importance of making sure the right container is used for the right fuel. It was noted how butane can be put in a propane container, but not vice versa due to variances of pressures. A good safety feature was described as having a relief valve discharge above the propelling unit (such as trucks).

Foote then listed a number of examples where human failure was at fault, using them as a warning to the class.

The next session on carburetion regulations as based on NFPA Pamphlet No. 58 was covered by Fred W. Fairbrother, American Liquid Gas Corp., Los Angeles.



Jerome Apt, Industrial Gases Inc., delivers the commencement address at the conclusion of the Carburetion Clinic. Apt warned the students against overselling the fuel as a cure for all engine ills.



Fairbrother (reading from Pamphlet 58) cited the following as being of prime importance when considering LPG as a motor fuel: the location of fuel supply cylinders, valves and accessories, and piping, tubing and fittings.

Back for a second time was Platt; this time his subject was lubrication. He started off with a discussion of the properties of lubricating oils and their purposes. From there he went into the uses of these oils in engine break-in. This, he noted, is a period of special importance in LPG engines. High-quality oils are of extreme necessity here, he noted. As a precaution he suggested that students making carburetion conversion jobs in the future check with an oil supplier to get his opinion on the best type oils to do the job at hand. This led to a discussion on the factors to be considered when deciding to drain oil.

Some of those factors included proper crankcase ventilation, type of work being done by truck, nature of the oil (i.e., in that through usage it tends to thicken up. That is, 30 weight oil tends to become 40 weight oil.) As a counter to this, he suggested using oil a SAE grade lighter for makeups.

Platt then discussed oil filters, which he said were subject to breakage if used too long. Filters should be changed every five to eight thousand miles whether it's apparent that they need it or not, he said. The reason for this is that though the filter may look clean, the paper in it may have become oxidized and, therefore, may break down at any time.

He noted that the only sure way to know when to change oil was to set up a testing procedure. This can be done through commercial laboratories, which will test the oil and tell when it should be changed. The results of these tests and the condition of the oil will vary with the type vehicle that it is being used in.

Taking over again for a moment, Moylan Brown told the students he was aware of the problem they might well be having in absorbing all this theoretical information which was being thrown at them in so short a time. It had been brought to his attention by members of the faculty and by the stu-



The clinic's over, and Murry Shaffer receives his graduation certificate from Moylan Brown.

dents that the clinic would be far more advantageous to the students if they had something they could take away with them—something physical, something in writing. He suggested that each student purchase a copy of the BPN *Power Manual*.

The next member of the faculty to speak was Raymond W. Landis of the John E. Landis Co., Lancaster, Pa. His subject was air filtration. He first described the purpose of an air filter in a carburetion system. He described the two types of filters commonly used: (1) the oil bath type and (2) the dry type air filters. He went into the design and theory of both of these types. From there he covered the factors that will foul up the filter and how to do preventive maintenance and repair on these filters.

"A dirty filter will cause more problems in LPG-powered vehicles than in those using gasoline," he said. He cautioned the students to keep the air filters away from bends in the tubing when hooking up dry-type filters for a conversion. Also, he warned that in especially dusty and dirty installations, filters should be mounted in the most advantageous places (i.e., as far away from the fan as possible; even above the hood if possible). He concluded his presentation with a film entitled "Air Filter Facts" by the Purolator Co.

Winding up the second day's morning session was Morris Rothman, Conservative Gas Co., New Hyde Park, N. Y. Rothman, an LPG carburetion sales expert, outlined to the students methods he

uses in trying to sell prospective customers on converting to LPG. He prefaced his remarks with the following statement: "This fuel has to be sold or all this knowledge you're gaining here is for nought."

He revealed that it has been his experience that prospective customers want to know the economic facts—how much it will save them in dollars and cents. This field can be one of the most lucrative in the sales business, Rothman said.

He singled out the fork-lift truck carburetion conversion field as being particularly profitable. "But, the economic advantages of LPG have to be proven to the man who is going to make the decision whether or not to convert to propane carburetion," Rothman pointed out. Continuing, he said, "Written proof of these economics is available via the articles appearing in BUTANE-PROPANE *News* and other trade journals. You can write to various companies, such as material handling concerns, and they will be glad to supply you with glossy prints of some of their equipment that has been converted. These photos, these reprints, should then be made up into a neat presentation booklet and given to that man who makes the decision."

Rothman then gave an illustration of a typical presentation booklet he would use. His example in this case was a company using eight fork-lift trucks. The first thing in the booklet is an explanation of LPG. "You'd be surprised," he offered, "but a lot of people have never even heard of propane!"

In addition to the pictures and

## Mr. Shaffer . . . At the last session he saw methods of advancing the ignition and re-calibrating a distributor

the reprints, his presentation would include also a copy of a Bastian-Blessing Co. report on carbon monoxide that shows how LPG virtually eliminates that hazard. This, he has found to be a big selling point for companies using in-plant equipment.

The booklet would also include

examples from a comparable company showing down-time and maintenance cost savings, availability of the fuel and the safety in handling it, and illustrations of how in some cases insurance costs can actually be reduced through use of LPG. Concluding, he said, "There's an awful lot of business to be had. I

think you can go out and get it."

Again a question-and-answer session followed.

The second Practical Factors Laboratory session found Shaffer in Platt's capable hands. Here he was given actual examples of ignition timing and its effect on the advance and retarding of engine RPM at idling speeds. Then Platt showed Shaffer and his co-students the effects of point setting on ignition advance and retarding. Later came the effects of leaking intake manifolding on idling speeds and mixture ratios.

The final classroom session, on installation layout and tank sizing, was conducted by Leonard H. Lemon, Bastian-Blessing, and Jack Glidden of Pro-Chem, Westfield, N. J. With a 1000-gal. storage tank and pumping equipment actually set up in the classroom, they first discussed the point, what customers need a bulk plant package deal and how can they justify the cost of the installation?

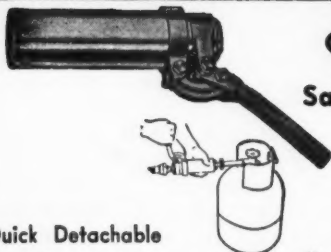
Lemon put it this way: "It takes programming, planning and thinking ahead. What worked in a previous installation may not necessarily work in the job at hand. But, once you've got a bulk plant in for a customer, then he is highly susceptible to increased gas sales."

Glidden and Lemon concluded their presentation by illustrating how to size pipe, select valves, and use the right tools. "Remember," Lemon warned, "if you're going to do an installation job, do it right. If you can't do it right, don't do it at all."

For the third and last time, Shaffer then went to the Practical Factors Laboratory. This time, Jack Krebs, Century Gas Equipment Co., was the instructor. He demonstrated methods of advancing the ignition and re-calibrating a distributor.

After the graduation luncheon, Shaffer received his "diploma" and then sat with his classmates to hear Jerome Apt, President of Industrial Gases Inc., Pittsburgh, Pa. Addressing the group as newly-

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**The faculty for the clinic included:**

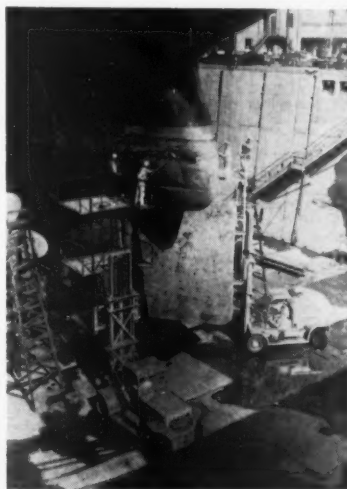
T. C. Rice, Parlett Gas Co., Waldorf, Md.  
 Leonard H. Lemon, Bastian-Blessing Co., Chicago  
 Fred W. Fairbrother, American Liquid Gas Corp., Los Angeles  
 B. D. Haynes, J & S Carburetor Co., Dallas  
 George Platt, Phillips Petroleum Co., Berwyn, Pa.  
 Dave Reber, Beam Products, Lansdale, Pa.  
 Raymond W. Landis, John E. Landis Co., Lancaster, Pa.  
 Tony Redden, Zenith Carburetor Division, Detroit, Mich.  
 Harry Foote, Solgas Division, Sun Oil Co., Marcus Hook, Pa.  
 Claude A. DuBois, Marvel-Schebler Products Division, Decatur, Ill.  
 T. Benenson, United Motors Service Division, Delco-Remy, Anderson, Ind.  
 Jack Glidden, Pro-Chem Co. Inc., Westfield, N. J.  
 Jack Krebs, Century Gas Equipment Co., Decatur, Ill.  
 Morris Rothman, Conservative Gas Division, National Propane Corp.,  
 New Hyde Park, N. Y.

commissioned "LPG carburetion experts," Apt was quick to remind them that despite all they had learned in the past couple days, "propane is not a cure-all. It will not make a worn out engine perform as a new one should nor will it cause an overloaded engine to operate as the proper sized one would. L. P. gas will not give you horsepower that isn't there.

"The greatest disservice anyone can do to the LPG motor fuel industry," he continued, "is to claim advantages for LPG that are not there or to misuse its built-in advantages. Don't try to oversell your potential customers. If you do, they'll become quickly disillusioned. . . . Keep in mind that a fork lift truck, operating one shift five days a week, can use 2000 gal. of fuel a year, and a concrete block delivery truck can use five times that amount or a full tank car in a twelve-month period. That's a lot of gallons in anybody's language and it's yours for the taking, if you sell it and keep it sold."

Shaffer's reaction to the success of the clinic was typical. "I came here looking for the answers to some of the carburetion problems we were facing and I got them. I also got a lot of the fundamental principles which before I had no concept of. I got quite a bit of information on trouble shooting," he said. "This course will be a definite help to me in the future in selling propane for carburetion. Right now, our company just sells the fuel, but we have been considering installing a bulk plant to co-

incide with our aims of going after truck carburetion. We needed a course such as this first. I hope to take back to Johnstown a lot of the information I picked up here and I'll try and teach the others at our company what I have learned. And," he offered in conclusion, "if they have any advanced courses such as were mentioned, you can be sure I'll be back to attend them."



These two L. P. gas powered fork trucks have reduced labor and maintenance costs on ship repairs at the Newport News Shipbuilding & Dry Dock Co., Newport News, Va. The two Clark trucks of 20,000 lb capacity, have a lift of 25 ft and can position 16-ft-high scaffolds to provide a work area for riggers as they clean, paint, inspect, and repair the underwater portion of vessels.

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## with the BEST

**J & S CARBURETOR COMPANY**  
 P. O. BOX 10391 • DALLAS 7, TEXAS





# CLASSIFIED Advertising

All Classified Advertising payable with order. Copy must reach publisher's office prior to the 1st of the month preceding publication. Address: Classified Advertising Materials, BUTANE-PROPANE News, 198 S. Alvarado Street, Los Angeles 57, Calif.

## DISPLAY CLASSIFIED

\$12.00 a column inch per issue. Choice of 18, 14, 12, 10 pt. display type for headings. Set with 1 pt. border. Maximum ad size 3". No cuts permitted. Publisher will set ad for maximum effect in space purchased.

UNDISPLAYED CLASSIFIED 15¢ a word. Set in 6 pt. type without border. \$3.00 minimum charge per insertion. If Blind Box number card of B-P News is used, count as five words.

POSITION WANTED. Undisplayed rate is one half of above rate, payable in advance.

DISCOUNT OF 10% if full payment is made in advance for four consecutive insertions of undisplayed ads.

## SITUATIONS WANTED

CREDIT MANAGER HAS DEVELOPED systematic plan of credit management and wants part time position with dealers in western states. Dealers reply to W. E. Locke, 3401 Balboa, San Francisco, Calif.

## HELP WANTED

WANTED: FULLY EXPERIENCED MANUFACTURERS Representatives Wall and Standing Built-in Ranges, and standard stoves all types. Box 1634, Muskogee, Oklahoma.

SALESMAN WANTED: LEADING fabricator interested in an aggressive salesman for domestic systems, storage tanks, transports, and delivery units. L. P. Gas experience preferred but not necessary. Choice territories. Send resume to P. O. Box 39, Quincy, Illinois.

YOUNG MEN INTERESTED in hard work in bulk plant construction and to assist Service Supervisor with service instruction. Must be free to travel during week. Reply: Thermogas Company, 4509 E. 14th Street, Des Moines, Iowa.

## LPG SALES ENGINEER

National designer and manufacturer of LPG Domestic, Storage, and Transport Vessels requires services of thoroughly experienced salesman with wide following among dealers and transporters. Salary, commission and expenses. Require two men—one, Dallas based for State of Texas; the other man will be based to sell Minnesota, the Dakotas, Montana, Wyoming and Nebraska. Send complete resume—photo, education, work background and references . . . to E. E. Garnsey, VP Charge Sales,

### TRINITY STEEL CO., INC.

P. O. Box 10587 Dallas, Texas

## PLANT MANAGERS

\$500 to \$1000 PER MONTH

Rapid and continuing expansion of leading Western LP Gas marketer has created immediate openings for fully experienced Plant Managers with proven ability who wish to live in the western states. These unusual opportunities require complete knowledge of bulk plant operation, carburetion, farm and industrial application of L.P.G. and experience with all types of gas equipment and appliances. Excellent opportunity for future advancement to larger plants or advanced supervisory assignments with commensurate increase in earnings. Starting salary will be in accordance with the size plant your qualifications prove you are capable of handling. Excellent and complete employee fringe benefit program. Mail complete resume of experience and personal background with recent photo to:

BOX #20, BUTANE-PROPANE News  
198 So. Alvarado St., Los Angeles 57, Calif.  
All applications confidential pending personal interview.

## BUSINESS OPPORTUNITIES WANTED

WANTED TO PURCHASE: RETAIL L.P. GAS business in Midwestern or Southeastern states. Reply Box 13, BUTANE-PROPANE News, 198 S. Alvarado St., Los Angeles 57, Calif.

WANTED: TO ACQUIRE L.P. GAS business in or within 50 miles of Chicago. Reply Box 19, BUTANE-PROPANE News, 198 So. Alvarado St., Los Angeles 57, Calif.

WANT TO BUY L. P. RETAIL GAS business on West Coast. Reply Box 22, BUTANE-PROPANE News, 198 So. Alvarado St., Los Angeles 57, Calif.

## BUSINESS OPPORTUNITIES OFFERED

LPG BULK PLANTS. WE SPECIALIZE in selling petroleum properties throughout Midwest. Have number desirable plants for sale. OLE BRODD, PETROLEUM MARKETERS, 605 Produce Bank Bldg., Minneapolis, Minnesota.

L. P. GAS BUSINESS FOR SALE—Bulk & Bottle—Southeast. 25,000 storage, 2 twin barrel delivery trucks. Clean competition. Priced right. Reply Box 21, BUTANE-PROPANE News, 198 So. Alvarado St., Los Angeles 57, Calif.

## FOR SALE — TRUCKS - TRAILERS

USED PROPANE DELIVERY TRUCKS, 1200 GALLONS W. C. Presently in use and being replaced with larger units. United Petroleum Gas Co., 4820 Excelsior Blvd., Minneapolis 16, Minnesota.

NEW AND USED DELIVERY UNITS—200 and 250# W.P. 1000 gallon to 1800 gallon, single and twin barrel. \$1500.00 up. PAT & CHUCK SUPPLY CO., P. O. Box 15333, Fort Worth, Texas. Ph. JE 6-2848.

## SPECIAL NOTICE!

### BUTANE-PROPANE DEALERS

Earn More Money Hauling More Gas and Less Steel . . . Load and Unload Faster

Balanced Nor-Tex units escape the annual Federal tax on trucks that weigh more than 13,000 lbs.! Users everywhere praise the Nor-Tex 2500 WG Single Barrel Payload Special of 202B X-rayed material. Weighs only 12,800 lbs.! Completely equipped with High Flow Plumbing, Meter, Hose, Hose Reel, Fire Extinguisher and mounted on cab-forward truck with 108" cab to axle dimension. Increased capacity pump boosts deliveries to 50 GPM. Vapor manifold permits easy, simultaneous loading and unloading of twin tanks with either compressor or liquid pumps. These popular, carefully engineered and sleek designed Nor-Tex Single and Twin units are produced in four attractive models: The "Standard"—The "Custom"—The Payload "Special" and the "De Luxe." That's not all! Twin units, up to 2000 WG, are mounted on 84" cab to axle. Start hauling more gas and less steel. Do it profitably and in much less time.

For prices, phone, wire or write

NORTH TEXAS TANK CO.

Denton, Texas

DUpont 2-5416.

## FOR SALE—TRUCKS - TRAILERS - Cont.

1953 CHEVROLET 1400 W.C. TWIN Trinitys. Neptune printometer, Viking pump, new hoses, extinguisher, ready to go \$2,500. Stewart's Philgas, Seymour, Indiana.

10,069 GALLON BUTLER T-1 Trailer. Perfect condition. Davidson Bros., Goodland, Indiana. Phone AX 7-3053.

NEW AND USED—200 & 250# W.P. trailers—5000 gallon to 10,600 gallon. \$2295.00 up. Will take your old unit in trade and finance balance up to five years. We give MORE for your old trade-in. PAT & CHUCK SUPPLY CO., P. O. Box 15333, Fort Worth, Texas. Ph. JE 6-2848.

TRANSPORTS: SINGLE OR TWIN barrel; new or used; for lease, or sale on budget or rental sale plan. If you want maximum payload, with all of the latest equipment engineered to fit your truck, roads, and your hauling problem, get the LMC PAYLOADER

Contact Lubbock Machine & Supply Co., Inc., Drawer 1589, Lubbock, Texas

## BULK TRUCK UNITS

NEW UNIT, ready to roll, at \$6500 can be financed (we carry our own paper) for \$650.00 DOWN and 36 payments of \$187.54, INCLUDING INTEREST.

Immediate delivery all sizes with any make truck.

Used Units also. We Trade.

Preston Grace

WHITE RIVER DISTRIBUTORS

Ph RI-3-2374-Batesville, Ark.

## FOR SALE—TANKS - CYLINDERS

### MOTHBALL PLANT

All or Part! Never used yet kept new with nitrogen!! Will relocate as complete atmosphere-creating industrial or bottle gas plant with excellent N. E. Illinois present location available!! Composed of two 30 M propane tanks; vaporizer, etc.; compressor; pumps; T.C. & T.T. risers; 90' Fence; etc., etc.

BOX 12, BUTANE-PROPANE News  
198 So. Alvarado St., Los Angeles 57, Calif.

## PROPANE GAS SYSTEMS

"Listed by Underwriters' Laboratories, Inc." If you use as many as one load of tanks per year, it will pay you to contact us. Distribution throughout the Mid-West and Southern states.

LOWRY TIMS COMPANY

Quality Steel Products Division, Cleveland, Miss.



# CLASSIFIED Advertising



## FOR SALE—TANKS—CYLS.—Cont.

### SKID TANKS

#### — IN STOCK NOW —

3000 gallon size built especially rugged for oil field use. Write, wire or phone  
**Lubbock Machine & Supply Co., Inc.**  
 P. O. Drawer 1589  
 Lubbock, Texas

## WANTED—MISCELLANEOUS

WANTED: USED 500 AND 1000 GALLON Propane tanks. Interested in up to 100 tanks. Will pay \$140.00 per 500 and \$290.00 per 1000 f.o.b. your lot. Interested in Illinois, Indiana, Wisconsin and Michigan only. All purchases subject to inspection. Call 5935, Frankfort, Indiana, or write P. O. Box 91, Frankfort, Indiana.

WANTED: USED 100 LB. CYLINDERS, from 200 to 400, in New York, Connecticut, Vermont or Massachusetts. Sherwood Electrical Service, P. O. Box 1029, Woodstock, N. B.

WANTED: 30,000 GALLON USED TANKS. Will consider 18,000 gallon also. Reply to Midwest Bottle Gas Co., 119 North 3rd Street, LaCrosse, Wisconsin.

WANTED: USED 1400 GALLON or larger delivery tank. Reply Box 18, BUTANE-PROPANE News, 198 So. Alvarado St., Los Angeles 57, Calif.

### WANTED USED 500 and 1000 Gallon Propane Tanks

WRITE or CALL  
**GRASSO BROS.**  
 8000 Reavis Barracks Rd., St. Louis 25, Missouri.

## FOR SALE—MISCELLANEOUS

DIXIE SEMI-LOCK HOODS, ALUMINUM and Aluminum coated steel. Wall bracket or free standing. GUARANTEED mechanically for life. \$3.00 up. Dixie Manufacturing Company, Elizabethtown, Kentucky, Box 65. Phone Collect RO-5-9229.

FOR SALE—IMMEDIATE DELIVERY! Eureka Smokehouse Burner Assemblies! For meat smoke houses using bottled gas. Completely automatic. Clean filtered smoke. Distributes heat uniformly. Low gas consumption. Automatic temperature and pilot control. Less product shrinkage. Easily installed. Write for descriptive pamphlet. Eureka Equipment Company, P.O. Box 396, Beloit, Wisconsin.

### SERVEL GAS REFRIGERATORS

S400A—4 cu. ft.

BN600A—6 cu. ft.

S600A—with Cross-top Freezer

Used: Guaranteed in good operating order. Excellent condition. Low delivery cost anywhere. Send for illustrated folder NOW.

#### BEACH REFRIGERATOR CO.

196-11 Northern Blvd. Flushing 58, N. Y.  
 Phone Flushing 7-6161

## FOR SALE—MISC.—Cont.

DECALS MADE FOR TRUCKS, EQUIPMENT. Small or large quantities. Catalog free. Mathews Co., 827 S. Harvey, Oak Park, Ill.

SURPLUS EQUIPMENT DISPOSAL—Propane Materials Warehouse, Erie, Pennsylvania. A wide assortment of useful items including: T & P relief valves, burner jets, torches, tips, electrical equipment, Kemp Carburetor, valves, electric hoist, Viking pumps, straight and taper shank drills, stove bolt, machine and pipe taps, tools, plated machine and stove bolts. All reasonable offers considered—Send for list of items of interest. The Protane Corp., 302 E. 131st, Cleveland 8, Ohio. Service Engr. Dept., Phone: GLenville 1-5220.

FOR SALE: BAKER ALCOHOL PUMPS. A must if you are in the gas business. Sure cure for moisture problems. Hydraulically designed for injecting alcohol into propane-butane tanks against pressure. Send \$59.95 for pump complete with fitting. Baker Engineering, Malone, New York.

### SERVEL REFRIGERATORS

4 & 6 cu. ft.—U-type Evaporator

6-7-8 cu. ft. Cross-top Freezer

Clean—Guaranteed—Low Cost Shipping

**FRED A. BROWN COMPANY**

170 W. Cumberland St., Phila. 33, Pa.  
 Est'd 1918 Call Collect RE 9-1130

## FOR RENT or LEASE

6,000 to 30,000 PROPANE STORAGE for sale, rent or lease. Financing and installation available. Reply Box 16, BUTANE-PROPANE News, 198 So. Alvarado St., Los Angeles 57, Calif.

## BUSINESS RECORDS

BUSINESS RECORD FORMS. ALL-WEATHER EZE-SNAP delivery invoices, for use when making LP gas metered truck deliveries. 1000 sets (3 part) imprinted with name, address and telephone. \$18.00 per 1000 sets. Advise make of meter. DEGREE DAY SYSTEMS, Dept. BP WOODSIDE 77, L. I., N. Y.

SERVING 20,000 PETROLEUM COMPANIES over 30 years with petroleum price cards, customer reminder Eze-Stik labels, telephone call—service order—L/P metered delivery invoices, Eze-Snap Service Form, Duraluminum ticket holders, Sort-O-Matic Rack, etc. Write us for details, no obligation. DEGREE DAY SYSTEMS, Dept. BP., WOODSIDE 77, NEW YORK.

NOW! BE FIRST TO GUARANTEE "AUTOMATIC" LP-GAS DELIVERY! Gas delivery whenever customer's tank gets low. The HIDE Degree-Day Recorder keeps you accurately informed of customer's supply on hand. Lets you schedule deliveries more efficiently and save 30% of trucking and book-keeping costs. Write for free details in Booklet CBA. And we'd like to know if you're now using a degree day system. HIDE-BROWN Recorder Co., 6988 Five Mile Road, Cincinnati 30, Ohio.

## PROFESSIONAL SERVICES

### PROPANE GAS PLANTS

ANHYDROUS AMMONIA PLANTS

Designed and Installed

**PEACOCK CORPORATION**

Box 268, Westfield, N. J.

## PROFESSIONAL SERVICES—Cont.

LET MY 32 YEARS OF PRACTICAL "LP" experience assure you maximum profits. Equipment revisions, property evaluations for sales or refinancing, and assistance on legal suits also supplied. Floyd F. Campbell, Management Counselor, 821 Crofton Ave., Webster Groves, Mo

### L. P. GAS INSURANCE

Have your agent write us about our Complete and Comprehensive Coverage for Adequate Limits of Liability at Reasonable and Normal Rates with Specialized Safety Engineering and Claim Service. Available only in Alabama, Arkansas, Arizona, Florida, Georgia, Kansas, Louisiana, Mississippi, New Mexico, Oklahoma and Texas.

PAN AMERICAN FIRE &  
 CASUALTY COMPANY

Earl W. Gammage, President

P. O. Box 1662 Houston, Texas

### The KNOW-HOW BOOK for LPG

#### • DEALERS • SALESMEN • SERVICEMEN

The Bottled Gas Manual has been accepted by many companies as the quickest way to acquaint new sales and service men with typical bottle gas problems. This 352 page (24 chapter) text book brings practical "working" facts to your entire staff in non-technical language. Nearly 10,000 copies in use.

**\$4.00 per copy**

We pay postage on orders accompanied by check or money order. In California add 4% for sales tax.

### Butane-Propane News

198 S. Alvarado Street, Los Angeles

### HOW TO FIND A BUYER

You can do it quickly, inexpensively with a classified ad in BUTANE-PROPANE NEWS.

# Advertisers

\*These advertisers carry additional information on their products in the 1959 Butane-Propane Catalog.

This advertisers' index is published as a convenience and not as part of the advertising contract. Every care will be taken to index correctly. No allowance will be made for errors or failure to insert.

*ACF Industries, Inc. American Car & Foundry Div. Third Cover	Gas Equipment Mfrs. Assn.	—	Powell Co., Wm.	—
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			*Zenith Carburetor Div., Bendix Aviation Corp.	—

# space was limited but Kurth Malting Company got propane for standby with ACF vertical propane storage tanks

Where space is at a premium, companies on interruptible natural gas contracts face a difficult storage problem. Often the solution lies in the installation of vertical storage tanks developed by American Car and Foundry. Available in capacities up to 30,000 gallons, these pressure vessels may be used for LP gas and anhydrous ammonia or, with slight modifications, for vinyl chloride, refrigerants and other compressed gases or liquids.

## ACF RIGID QUALITY STANDARDS GUARANTEE SATISFACTION

■ Vessels fabricated to ASME, ICC, USCG or ABS specifications

■ Latest manufacturing techniques ■ Large stress relieving furnace—up to 12½ ft. diameter, 120 ft. long ■ Complete X-ray facilities for 100% joint efficiency ■ Steel grit blasting before priming ■ Inspection by Hartford Steam Boiler Inspection and Insurance Co.

## AMERICAN CAR AND FOUNDRY

Division of QCF Industries, Incorporated  
750 Third Avenue, New York 17, N. Y.

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SAN FRANCISCO

Three 30,000  
gallon vertical  
propane storage  
tanks built for  
Kurth Malting  
Company in  
Minneapolis.



These famous twins...mean

# FULL gas range CONTROL



**FLAME MASTER™**... the unmatched low temperature oven control system



**FLAME SET™**... the newest "burner with a brain"\*

## Robertshaw FLAME MASTER

- full temperature control down to 140°... for warming, defrosting, food keeping
- no w-i-d-e temperature swings
- no buttons to push
- cool, complete modern cooking
- longer service-free life

## Robertshaw FLAME SET

- no more burned pans
- no more scorched food
- small flame for small pans
- BIG flame for BIG pans
- simplest to operate

\*AGA MARK

... only from Robertshaw ... the name that MEANS temperature control !

Yes ... the very best gas ranges are equipped with these two famous control twins. To help you sell ... to give *your customers* the very best ... insist on FLAME MASTER control for every oven and FLAME SET burner-with-a-brain on every top unit.

For full details on both these *exclusive* controls, write today to Robertshaw ... the name that MEANS temperature control. Robertshaw Thermostat Division, Robertshaw-Fulton Controls Company, Youngwood, Pennsylvania.

VMA 6987

# Robertshaw





